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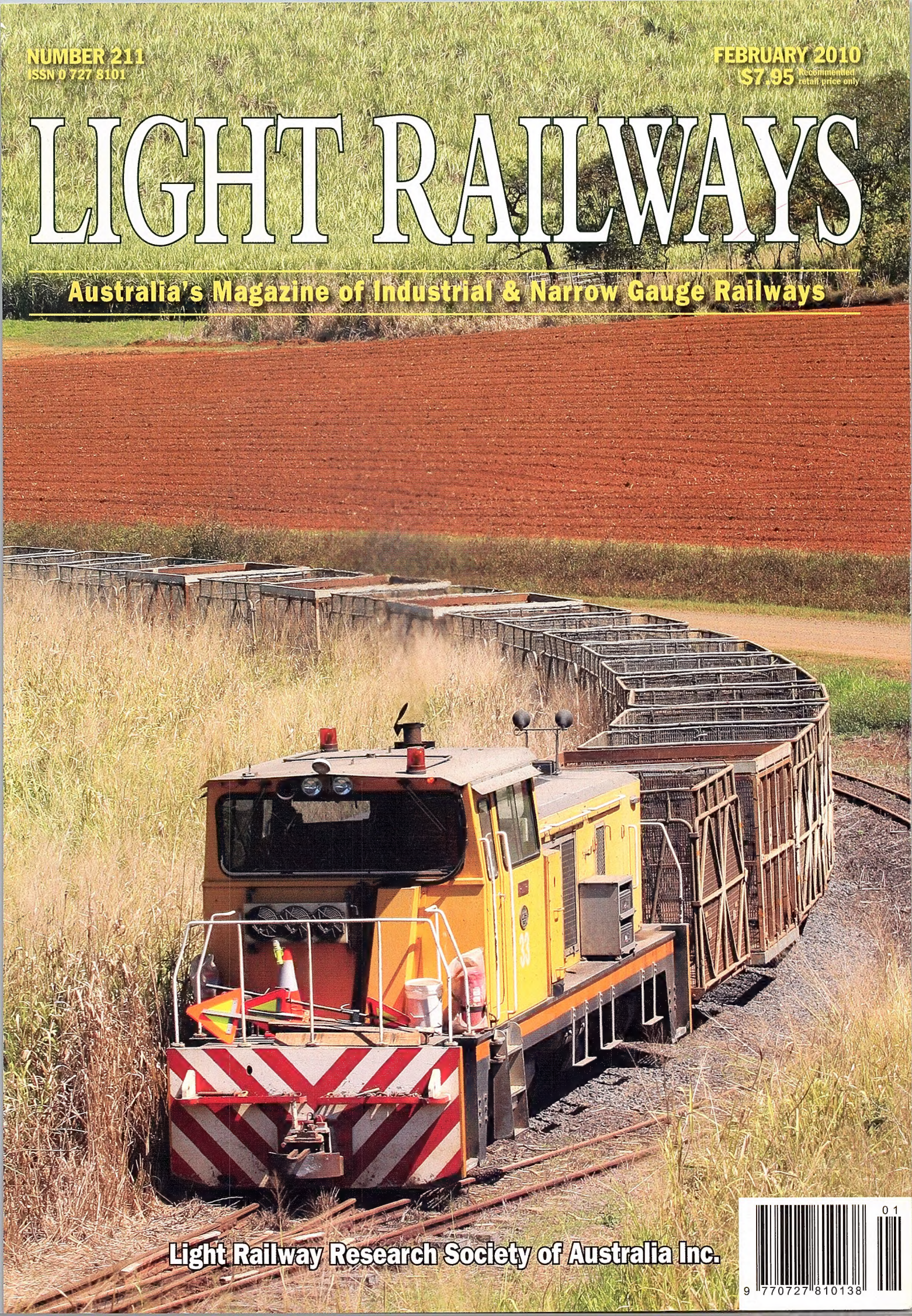
LIGHT RAILWAYS

Australia's Magazine of Industrial & Narrow Gauge Railways



Light Railway Research Society of Australia Inc.

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LIGHT RAILWAYS
Australia's Magazine of Industrial and Narrow Gauge Railways

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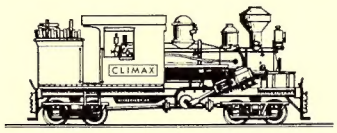

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Conversions:

1 inch (in)	25.40 millimetres
1 foot (ft)	0.30 metre
1 yard (yd)	0.91 metre
1 chain	20.11 metres
1 mile	1.60 kilometres
1 ton	1.01 tonnes
1 pound (lb)	0.454 kilogram
1 acre	0.4 hectare
1 horsepower (hp)	746 Watts
1 gallon	4.536 litres
1 cubic yard	0.765 cubic metres
1 super foot (sawn timber)	0.00236 cubic metre

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Comment

In a recent radio interview, an acclaimed children's author characterised the age of 'political correctness' as "these days we've all become so terribly polite to each other".

No problem with that. I was brought up to always be polite and considerate. However, I believe that historical research is no place for niceties and, to do its job properly, it really must adopt a 'tough love' attitude of brutal honesty.

Even the most objective writers and historians will still view the events of the past, or present, through the prism of their own life experiences, so it's difficult enough to get to the facts without worrying about what might offend people.

So far as we are able, we owe it to posterity to always tell the truth. To my mind, history with its punches pulled is not real history at all. *Bruce Belbin*

The Light Railway Research Society of Australia Inc. was formed in 1961 and caters for those interested in all facets of industrial, private, tourist and narrow gauge railways in this country and its offshore territories, past and present.

Members are actively involved in researching light railways in libraries and archives, interviewing knowledgeable first-hand participants and undertaking field work at industrial sites and in the forests.

Light Railways is the official publication of the Society. All articles and illustrations in this publication remain the copyright of the author and publisher. Material submitted is subject to editing, and publication is at the discretion of the Editor.

Articles, letters and photographs of historical and current interest are welcome. Contributions should be double spaced if typed or written. Electronic formats accepted in the common standards.

Material is accepted for publication in *Light Railways* on the proviso that the Society has the right to reprint, with acknowledgement, any material published in *Light Railways*, or include this material in other Society publications.

CORRECTION and APOLOGY

In Frank Stamford's Article Steam locomotives on Victorian timber tramways – Part 2 *(LR 210), endnote 2 dealt with the convention used by the editors in dealing with locomotive names in* Light Railways. *The intention of the convention is, in the interests of historical accuracy, to reproduce locomotive names exactly as they appeared on the locomotive, and to distinguish between names actually carried and names that, although not carried, were used by workers and/or management. The use of this convention, which goes back to at least 1988 in* Light Railways *and 1977 in* Light Railway News, *is similar to that used by the well respected Industrial Railway Society in Britain.*

The endnote in question should have been printed as an 'Editors' note' rather than an endnote. Further, the use of the convention by the editors in this article failed to fully serve the interests of historical accuracy. Frank points out that he has no evidence that 'Parrot' ever carried its name. On the other hand, MONA *apparently did, and it is likely that 'Amie' and 'Lily' also did. They were certainly 'official' in so far as they were bestowed by the management.*

The editors apologise to Frank for any embarrassment that these lapses have caused.

Front Cover: *South Johnstone Mill's B-B DH* NYLETA *(Prof Engineering P.S.L. 25.01 of 1990 rebuilt South Johnstone 1993) at Fisher's Creek as it heads its train of empty bins towards Nerada on the old Innisfail Tramway, 22 August 2009. Photo: Scott Jesser*

A-class Climax locomotive 'Corry-Pa' (1676 of 1926) on one of the large trestle bridges near the Gap. As the Wootton Tramway was extended towards the headwaters of Horses Creek, trestle bridges became bigger and higher. The larger bridges were a headache during bushfire weather, and required more maintenance. After a 1929 bridge derailment involving 'Corry-Pa', check rails were installed on the larger bridges.

Photo: P Sellars collection, courtesy Bruce Macdonald

The Wootton-Mayers Point Tramway

by Ian McNeil

Introduction

The Wootton Tramway was a 17-mile (27km) long 3ft 6in gauge timber railway located in the hinterland of the lower north coast district of NSW. It ran from Mayers Point on the northern shore of the Myall Lakes into the hardwood forests west of Wootton village. Constructed in stages, the tramway started life in 1906 as an 8-mile wooden-railed horse line and finished in 1943 as a steel-railed line operated by Climax steam locomotives. During its operating life, countless thousands of railway sleepers as well as bridge girders, wharf piles and saw logs were transported to the Mayers Point wharves for shipment to local, interstate and overseas markets.

Early accounts of the Mayers Point-Wootton Tramway were recorded by CC Singleton in 1948, and by David Burke in 1980.[1] However the first definitive history of the line was published by the late Harry Wright in October 1982.[2] Since then considerably more information has come to light. While this enlarged history uses material from Harry's article, it mainly draws upon the extensive business archives of Allen Taylor & Co. Limited.[3,4] The information in these archives has allowed the history of the Wootton Tramway to be pieced together as it unfolded down the years. Of particular value and interest are the Port Stephens area inspection reports written by Sir Allen Taylor himself. They are first-hand contemporary accounts describing the rationale, construction and operation of the Wootton Tramway, and considerable use has been made of them.

Unless annotated otherwise, all passages appearing in italics in this article are extracts from Sir Allen Taylor's reports, Board Meeting minutes, correspondence files and company memoranda. Imperial units of measurement appear frequently in the quoted extracts and have been retained in the interests of historical accuracy.

[NOTE: A superficial (super) foot measured timber for the purpose of payment and referred to a section 12 inches (30.5cm) square by 1 inch (2.5cm) thick.]

The Coolongolook Brush

The native forests of the lower NSW North Coast contained huge quantities of hardwood timber. Early logging in these coastal forests tended to concentrate on areas that were easily accessible by water. The most sought after species included turpentine for wharf piles, ironbark for bridge girders, brush-box for decking, white mahogany and grey gum for railway sleepers and borer-resistant tallow wood for general construction. Shallow-draft punts and droghers plied the inland water ways of Port Stephens and the Myall Lakes taking timber down to the deeper waters of Port Stephens. There it was transshipped into small coastal vessels for passage to Sydney and interstate markets.

The best quality hardwoods were found in the brushes, pockets of sub-tropical rain forest occupying sheltered creek valleys. One of the best in the Buladelah area was the Coolongolook Brush near Wootton. Containing over 75,000 acres of densely timbered virgin forest, it had remained mostly unexploited during the nineteenth century due to its relative inaccessibility.

The Australian Timber Export Company

The first company to begin systematic exploitation of the Coolongolook Brush was the Australian Timber Export Company (ATEC) Limited.[5] It was registered in March 1905 with a capital of £25,000 in £50 shares, to acquire the Sydney-based timber business of Colonel McKay and Messrs OMD Bell and EMD Spring. ATEC was mainly involved in timber trading for the export market. It had established a depot at Hawkes Nest and was exporting large numbers of railway sleepers to India. To expand its business ATEC took steps to secure sources of timber in the Coolongolook Brush and proposed to install a saw mill in the brush with an outlet tramway to the Myall Lakes.

On 11 July 1906 ATEC was granted Special Lease 1906.4 Taree[6] for 32 acres of land for tramway purposes at an annual rent of £40. This 10 year lease consisted of a strip of land ½ chain wide and 8¼ miles long, stretching from Mayers Point on the Myall Lakes to the present-day site of Wootton village. In the same month it was reported that the machinery for the saw mill had been ordered and together with the planned tramway was going to cost an estimated £16,000.

ATEC also intended to access other timber resources in the district. It was granted additional Special Tramway Leases (1906.9 Stroud, 1907.8 Stroud, 1907.17 Stroud) west of Buladelah to tap into the Purgatory Brush forests adjoining the Crawford River. A surveying party was reported working up a route into this area in September 1907.[7] As it turned out, construction of these tramways never progressed beyond the survey stage and the leases were allowed to lapse when they expired in 1912.

ATEC aroused local hostility when it applied to the Crown for the sole right to cut and remove timber from large areas of the Coolongolook Brush. The area's teamsters made their living cutting and drawing logs to saw mills and water depots, and they resented any perceived threat to their trade. An account of teamsters and their trade appeared in a local newspaper in 1904:[8]

As one proceeds from Stroud towards the coast, one enters a district in which the timber industry becomes more prominent. At Bulahdelah, dairying and timber getting flourish side by side [but] further east, working bullocks and King Log reigns supreme.

Constantly one passes on the road the long double line of from 16 to 20 bullocks pulling patiently and steadily at the truck which bears the main body of some giant tree. A man skilled in the work and with the price of a turnout, £150, can make very decent wages at the game. Sometimes with a little luck or a little brainwork, the timber getter strikes a minor bonanza for a time, as when a drought dries a marsh which has previously rendered inaccessible a fine patch of blackbutt or tallow wood. In just such circumstances lately, two teamsters made £50 a month each for several months.

Generally a hard-living, often a hard-drinking, but jovial good hearted crowd are these timber getters. They often number in their ranks some very fair amateur pugs – generally of the rushing type. One or two of their centres, hidden away in the great scrubs, are noted for the number of willing goes that take place when the hard earned money is ladled out and the fighting bush whiskey is taken in.

The teamsters' hostility towards the company was demonstrated in evidence given to the 1907 NSW Royal Commission into Forestry hearing held at Buladelah on 30 July. ATEC manager, Vincent de Coque, complained that local teamsters were interfering with the Company's business:

These cutters have simply gone in and fallen trees – 200 tallowwoods, I can't touch them because they say they are theirs. Every man who has a license at a cost of 2s 6d can cut an area of country 50,000 feet of timber. Some of the timber will simply rot. I cannot touch it and the cutters cannot bring it in owing to the state of the roads.[8]

Vincent de Coque also went on to describe something of the company's business. He said they had 45 sleeper cutters working along the tramline, producing 1500 sleepers a week. They were paying the cutters 1s a sleeper, a royalty of 3d a sleeper went to the Forestry Department, and each cost another 1s 6d to ship to India. ATEC also had a saw mill operating at the head of the line which had started up only recently, in May 1907. It was cutting brushbox to be used as decking by the Public Works Department and the Harbour Trust.

The Mayers Point horse tramway

Mayers Point is a short, narrow promontory on the north shore of the Myall Lakes. It juts out into the lake like a small appendix. The western side was already occupied by a timber wharf and a horse tramway belonging to local saw-miller, Alexander Croll [see *Light Railways* 182, April 2006]. His tramway ran for about 3 miles in a north westerly direction to tap into local hardwood forests. Logs were hauled down the tramway to the wharf, loaded onto punts and shipped to Croll's sawmill at Bungwahl wharf, a few miles to the east. Croll was said to be a domineering figure and did not take kindly to the close proximity of a rival's wharf and tramline.

ATEC commenced construction of its 8-mile tramway to Wootton in July 1906. The eastern side of Mayers Point was selected for its timber wharf, a short stone's throw from Croll's wharf. The ATEC tramway ran due north on level ground for one mile, separated from Croll's tramway by an isolated hillock immediately to the north of the promontory. Once clear of the hillock the line turned in a northwesterly direction and for the next 1½ miles was carried over low-lying swampy ground on a low embankment. Then the tramway's major obstacle was encountered—the notorious O'Brien's Hill, a problem ascent that was to hinder operations for the entire life of the venture.

Fronting the northern shores of the Myall Lakes is a low coastal escarpment, locally reaching over 100 metres in elevation. The coastal face of the escarpment is steep and offered little assistance for the selection of an easy tramway route. The company had to settle for a very steep 1:5 grade up the side of a ridge to reach the top. The route was surveyed in July 1906 by licensed surveyor John Travers. It crossed freehold land owned by a local settler, Joseph O'Brien of Bungwahl who granted a right-of-way to ATEC for the consideration of £50 plus £5 per year.[10]

Once the summit of the escarpment had been reached, the going was easier. Still continuing in its north-westerly direction, the tramway undulated along a wide ridge-top for another mile until reaching the headwaters of the Coolongolook River. There followed a fairly steep descent, called the Long Hill, down to this watercourse. The tramway then continued along its north-eastern bank until reaching the terminus where the Buladelah-Coolongolook Road crossed the river.

Earthworks on the horse tramway were minimal, being mostly confined to low embankments crossing swampy terrain and shallow sidlings cut through the toes of occasional ridge spurs. A few low bridges and culverts sufficed to cross

tributary creeks of the Coolongolook River. The tramway was wooden-railed but the gauge is not known.

There were up to five horse teams operating on the tramway, each team usually consisting of four horses hauling a single pair of timber bogies. On descending grades the practice was to unhitch the horses and free-wheel the timber bogies downhill, the driver controlling the speed with a lever-type hand-brake. The well-trained horses obediently followed on by themselves.

ATEC operated its Wootton enterprise for less than three years, selling all its Port Stephens interests in 1909 to the up and coming timber firm of Allen Taylor & Company.

Allen Taylor & Company

The story of the timber firm of Allen Taylor & Company Limited is the story of its founder, Sir Allen Taylor. [11] He was a self-made man, and through his own considerable abilities rose to become a dominant force in the NSW hardwood timber industry.

Allen Taylor was born in humble circumstances in Wagga Wagga, NSW in 1864. He started work as a messenger boy for a railway contractor at the age of 12, then as a railway construction labourer before branching out as a contractor himself. After saving some money, he moved to Sydney to attend night school to improve his education.

He became a timber and shipping agent early in 1892, later opening an office in Union Street, Pyrmont. The early success of his timber business was attributable to Taylor's talents as a salesman and administrator. He would canvass all the timber merchants around Sydney, soliciting orders and asking for specifications. Then he would place orders with north and south coast sawmills, making clear when delivery was required. As soon as Taylor found out when an order would be ready, he arranged for its prompt shipment to Sydney. By insisting that his instructions to sawmills and shipping agents were carried out to the letter, Taylor's reputation for reliability grew rapidly, and so did the business.

Sir Allen Taylor in 1905, during his time as Lord Mayor of Sydney. Photo: courtesy of City of Sydney Archives

Taylor moved into the field of coastal shipping in the early 1890s. At first small schooners and ketches were contracted to transport his timber from various coastal ports to Sydney. As his business grew he began to purchase ships, then to have his own vessels built. By 1904 the Allen Taylor shipping line had a small fleet of wooden steamers and was maintaining regular services to the Manning and Bellingen Rivers, Tuncurry, Camden Haven and Port Macquarie. In 1919 the shipping interests were absorbed by the North Coast Steam Navigation Co Ltd with Sir Allen Taylor becoming its Chairman.

A man of immense drive and energy, Taylor also turned his attention to civic affairs. He was first elected Mayor of Annandale Council in 1897, then served twice as Lord Mayor of Sydney. He embarked on a vigorous program of civic improvements, including the creation of Taylor Square in Darlinghurst, which is named after him. For his services to the community he was knighted in 1911. He entered politics, serving as a Member of the Legislative Council from 1912 until his death in 1940. He was also well known for his charitable and philanthropic activities. Some idea of Sir Allen's work ethic can be gained from this description: [12]

Sir Allen was also a tireless worker and was considerably more than a mere chairman. He was also a managing director and spent a lot of his time practically every day at the Company's wharves in Sussex Street, [Sydney] where he visited all the heads of departments, the superintendent engineer, marine superintendent, draftsman, accountant, and so on, commencing with the practical branches before 8 a.m. Ships' plans and accountancy figures and graphs were meat and drink for him. He had a wonderful memory for figures and it was most unwise to quote figures without being certain of accuracy, as one could be faced with the same question months or years hence, probably for comparison purposes and one was not in a very comfortable position if the answers did not agree.

Taylor's private timber firm was incorporated as a public company, Allen Taylor & Company Limited, in February 1905. Investment in the Port Stephens area began in 1909 with the purchase of ATEC's Wootton tramway and Frederick Phillips' Markwell tramway. Their primary trade continued as the supply of turpentine wharf piles and hardwood railway sleepers. One contract alone in 1910 was for 200,000 sleepers for the Dungog section of the NSW North Coast Railway. All this timber was shipped down the Myall Lake waterways by shallow draft steam punt to the deeper waters of Port Stephens where it was transshipped to coastal steamers.

Sir Allen was both Chairman and Managing Director of his Company and paid regular visits to the Wootton district, to inspect the progress of his various enterprises. He insisted upon high standards, and did not hesitate to use his encyclopedic knowledge of the timber business to give strong advice and stern directions to remedy slack performance. On the other hand, he could also be a generous and loyal employer. Old-time residents of Wootton used to say that when they got word of an impending visit by Sir Allen, the place would go into an instant hive of activity to make sure everything was ship-shape.

Sir Allen resigned the managing directorship of his company in 1924, being succeeded by his very capable deputy Mr FA Sargeant. But he was persuaded to stay on as Chairman, a position he held until his sudden death on 30 September 1940 at the age of 76.

Wootton village

A small settlement, now known as Wootton, grew up around the mill. The earliest description of the village during the horse tramway era was published in 1912: [13]

It is probable that most of your readers know little or nothing of Wootton, a rising village situated between Buladelah and Coolongolook. For some time the locality was known as Coolongolook Brush or in briefer terms "The Brush". Since the tramline was purchased by Allen Taylor and Co Ltd, the new name of Wootton has been designated. This tramline runs from Wootton to the Myall lakes, a distance of 8¼ miles. The firm is improving the locality in the way of erecting cottages for employees, and in addition to this a number of settlers have taken land in the vicinity.

Some 2 months ago the tennis court was completed after considerable work, as the site had to be excavated to a depth of 3 feet in order to secure a level. The tennis club has already played 4 matches, winning two and losing two. On Saturday a team came from Bungwahl, and after a day's enjoyable play, succeeded in defeating the local players by 9 games.

The visitors were met 5 miles from Wootton, and proceeded thence on tramline trucks, suitable seats having been improvised. As the line runs through a thick brush, the trip proved most enjoyable. After the match they were conducted back in a similar manner, horse driver Tones showing unusual skill in driving at a smart rate. During the trip back some of the Wootton players essayed to sing, but failed to win the appreciation of the visitors . . .

Steam tramway conversion

After purchasing the Wootton horse tramway in 1909, Allen Taylor & Company continued to use it to convey a growing trade in railway sleepers and wharf piles to the Mayers Point wharf. In 1913 large contracts were won to supply the Public Works Department with sawn hardwood and in the following year the company successfully tendered to supply sawn hardwood, tallow wood, blackbutt, hewn ironbark and wood paving blocks to the New South Wales Railways for the Sydney area. With secure markets for its timber, the company began to expand operations at Wootton.

Thomas Kennedy, a licensed surveyor, was commissioned to assess the forest resources of the Port Stephens district. He submitted a lengthy report on 3 September 1913, part of which is reproduced below:

Situated to the north of Port Stephens and immediately surrounding Buladelah are extensive forest reserves, all within easy distance of the navigable tributary channels connecting the Myall Lakes with the deep waters of Port Stephens. There are three distinct timber areas which have been secured by the Company owning the tramway rights connecting the outlets to these forests with communication to navigable waters. Wootton is the most easterly forest area; Markwell the northern area and Purgatory the southern forest area.

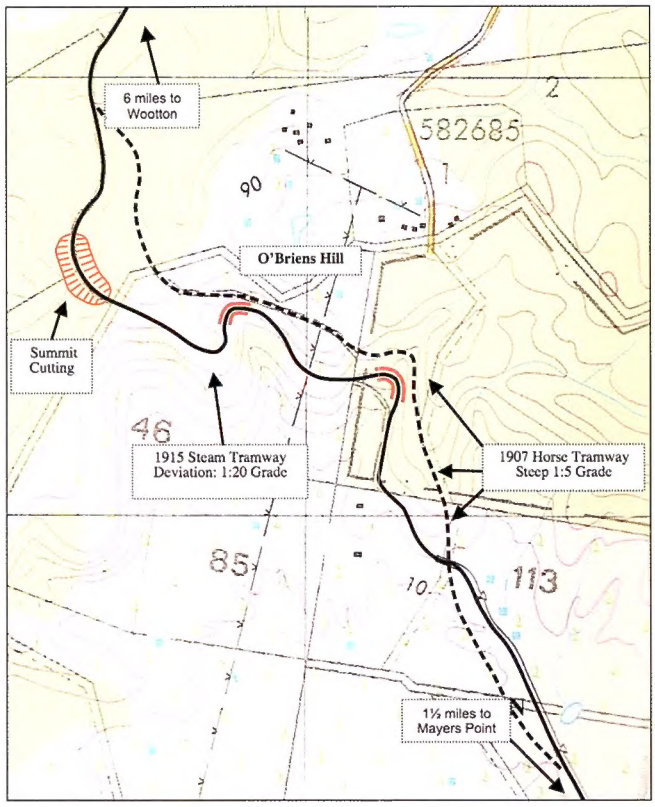
The Wootton forest embraces an area of 50 square miles practically in its natural state. The whole of the land, with the exception of about 5000 acres is reserved for timber and practically unsuitable for settlement purposes. The quantity of marketable timber is estimated to be 640 million superficial feet. The class of timber consists of Tallowwood, White and Red Mahogany, Grey and Blue Gum, Brush Box and Turpentine. The ridges have gentle slopes and are intersected by small watercourses having a gradual fall towards the direction of the main Depot, so that the haulage will be practically on a down grade.

The company is in a unique position regarding the forest in as much as the only means of outlet is secured by the horse tramway connecting with the navigable waters of Myall Lake. The length of the tramway is about 8 miles, owing to the adverse grades however the full advantage cannot be taken advantage of. It is proposed to remedy this and instructions have been given to the surveyor to make a survey of the necessary alterations and deviations which can be effected by the expenditure of about £300. One descent on a steep grade of 1 in 5 [O'Briens's Hill] *can be eliminated by a deviation of about half a mile on a grade of 1 in 15 substituted.*

On the other portion of the tramway the grades and curves can be improved by making short deviations. This will improve the line so that the carrying capacity can be doubled using the same number of men and horses as at present. It is recommended that the tramway be extended another 1¼ miles along the Coolongolook River so as to bring the depot to a more central and accessible position. One object to be kept in mind in improving the tramway is that in the future it will be advisable to convert the horse traction into a steam proposition, the gauge recommended being 3'6", this being the standard gauge of Queensland, Tasmania and parts of Western Australia.

Another vital point is that under existing arrangements the Company is under the influence of bullock teams. If steam traction were introduced in all probability the teams would be unable or unwilling to keep the line fully occupied. The difficulties fortunately can easily be overcome by the introduction of steam log haulers. For the present I recommend that a log hauler be installed at Wootton after the tramway has been extended for 1¼ miles as proposed.

Although initially interested in developing all three forest areas, Allen Taylor & Company decided to concentrate its efforts on the Coolongolook Brush near Wootton. The existing Markwell and Purgatory horse tramways were abandoned by the end of the First World War, though not before several thousand pounds had been spent trying to extend and upgrade the Purgatory line. Sir Allen Taylor took a personal interest in the development of the Wootton enterprise and lobbied his Board of Directors for investment capital. At his August 1913 Board Meeting Sir Allen stated that he had visited the



The steep range of hills bordering the coastal plain behind Mayers Point was known as O'Brien's Hill, named after pioneer settler Joseph O'Brien. In 1907 the Australian Timber Export Company leased a right-of-way from O'Brien and constructed their wooden-railed horse-tramway up a steep 1:5 grade to climb the range. When Allen Taylor & Company converted the tramway to a steel-railed line in 1915, they constructed a ½-mile deviation to reduce the ruling gradient to 1:20 for steam locomotive operation. Tight 3-chain reverse curves on this grade made it a difficult section of line to operate. The largest cutting on the line – the 4-metre deep, 100-metre long Summit Cutting – was cut through solid rock at the top of the climb.

Company's various interests in the Port Stephens District, and added his own endorsements to surveyor Kennedy's report:

The [horse] *tramline is worn out and is almost unworkable. It must be re-laid its entire length at once and I would recommend that plenty of good sleepers, say half rounds, be used at least 2000 to the mile, length not less than 6 feet to 6 feet 6 inches so that we could get a good job. Strengthen the bridges, culverts etc, costing in all approximately £1,600 to £2,000 extending over 8 to 9 months. This together with the additional teams, trucks, new horses, etc., which must be ordered will entail another £500.*

Expenditure in all £2,500 which must be provided at once and the work put in hand. If we attempted to repair the line it would cost easily £500 which would give temporary relief. The fact is the line (which has been laid down 9 years and was only an inferior one) is completely worn out; but on the whole has done wonderfully good service.

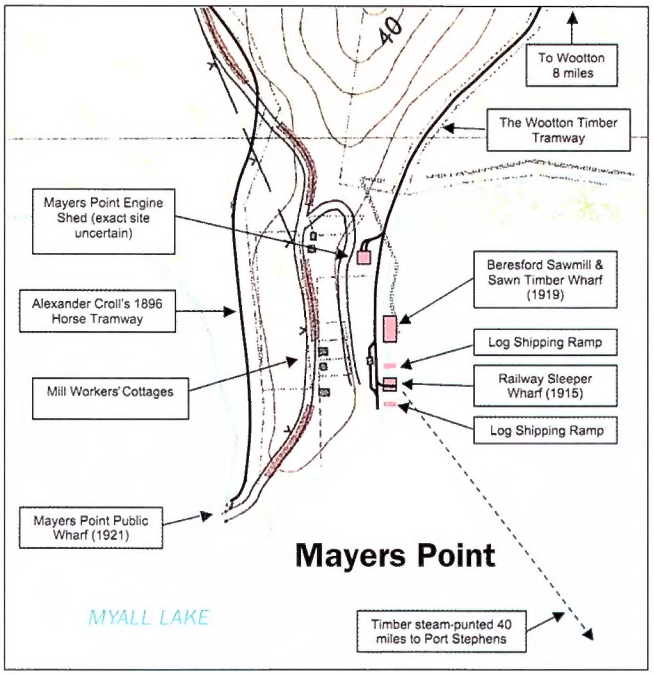
For preference I should like to see this line made permanent with iron rails and with a few alterations in grades and curves, together with a light engine and the necessary rolling stock which would give us a wonderful asset at a cost of say £10,000. It is necessary to pick up a few tons of iron rails for curves without delay, and they should not be less than 32lbs per yard and not more than 40lbs.

The conversion project was approved and work commenced soon afterwards. At the March 1914 Board Meeting, this progress report from Sir Allen was read into the minutes:

[The Chairman] *had visited Port Stephens in company with Engineer Kennedy and Surveyor Kenny and had completed arrangements to proceed with the reconstruction of the Wootton Line. He had also arranged to purchase 8 acres of land from Joseph O'Brien for £30, a necessary purchase on account of the proposed tramway deviation up the coastal escarpment crossing this property. It was thought that the new work would take at least 6 to 8 months to carry out, but it would make a permanent job, and eventually steam traction could be profitably employed. The outlook for sleepers along the line is improving and large supplies are available.*

The task of converting the wooden-railed horse tramway to a 3ft 6in gauge steel-railed steam line took nearly 15 months and was not completed until June 1915. The major work was the deviation at O'Brien's Hill. To achieve a suitable gradient for steam traction, a new formation was carved across the steep hillside. Sharp reverse curves of 3 chains radius were employed to achieve a 1:20 climbing gradient that twisted into steep gullies and out around intervening spurs. Curved trestle bridges crossed the two largest gullies. Fairly substantial earthworks were constructed near the summit of the climb—a large embankment followed by a 100 metre long rock-walled cutting estimated to be more than 4-metres deep. Just north of this point the deviation rejoined the old horse tramway formation.

To relay the tramway, Allen Taylor & Company purchased some 12 miles of second-hand 28lb Carnegie Steel rail which had come from Ireland. Smaller quantities of 35lb and 45lb rail were also acquired.[2] As per Surveyor Kennedy's recommendation the tramway was extended to a more central timber loading depot beyond Wootton. A two-mile extension continued down the northern bank of the Coolongolook River to its junction with Carrington Creek. The tramway turned up this creek and followed it upstream to a railhead at its junction with Worths Creek, where the new timber depot was established. The final cost of the project exceeded £15,000, considerably more than Sir Allen's original estimate. Wootton village became the headquarters of the company's operations in the area. A manager's residence was built along with six cottages that were rented out to employees. There was also the company office, post office, general store, a blacksmith's shop, an 18-stall horse stable, and a hay and harness shed. Telephones were installed in the manager's


40
To Wootton 8 miles
The Wootton Timber Tramway
Mayers Point Engine Shed (exact site uncertain)
Alexander Croll's 1896 Horse Tramway
Mill Workers' Cottages
Mayers Point Public Wharf (1921)
Beresford Sawmill & Sawn Timber Wharf (1919)
Log Shipping Ramp
Railway Sleeper Wharf (1915)
Log Shipping Ramp
Mayers Point
MYALL LAKE
Timber steam-punted 40 miles to Port Stephens

The Wootton Timber Tramway terminated along a narrow strip of flat ground down the eastern side of Mayers Point. Rail facilities were simple. The main line extended down along the water's edge, passing behind the Beresford Saw Mill, the sleeper wharf, and the log loading ramps. Logs for the mill or the shipping ramps were rolled directly off timber bogies while they stood on the main line. Near the end of track was a single loop siding that functioned as an engine release road, while a short siding curved sharply off the main line and led onto the railway sleeper wharf.

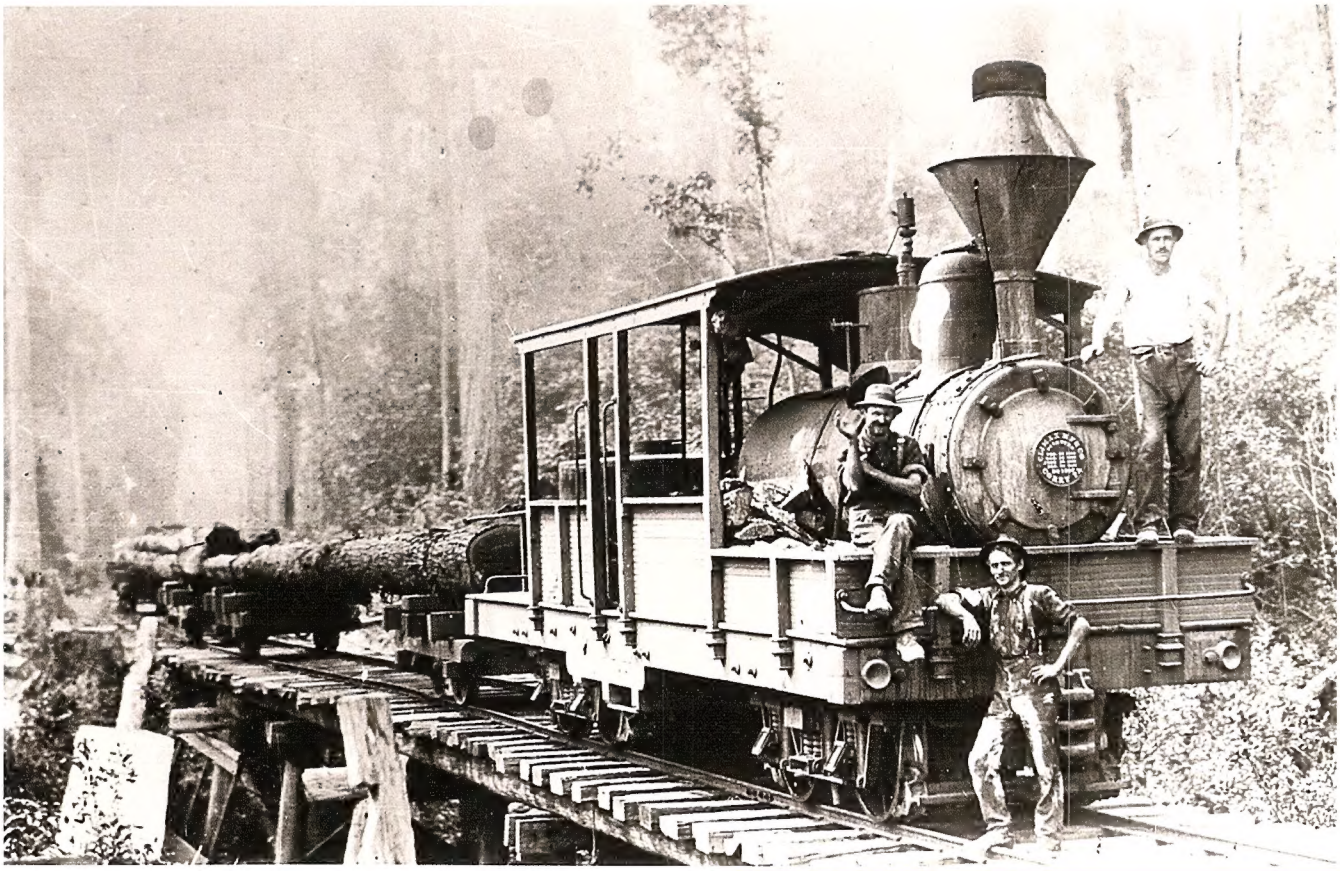
residence and in the company office. Albert Dun was the first Wootton manager and Jack Leedham the blacksmith.

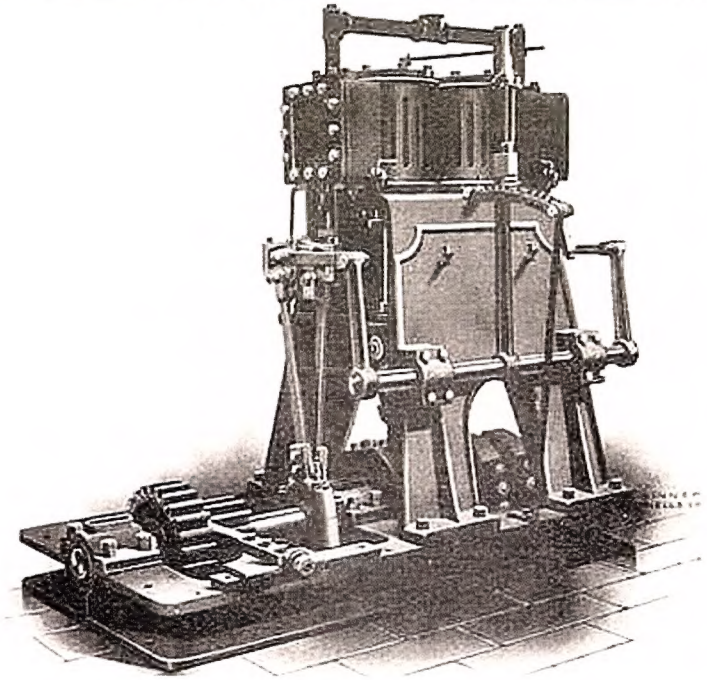
The wharf facilities at Mayers Point were also upgraded to handle the projected increased tonnage of timber. Extra wharf frontage was constructed so that three steam punts could dock and load timber at the same time. A short siding curved sharply off the main line onto this wharf to facilitate the unloading of sleepers. A two-bay engine shed was built further back on slightly higher ground, above the lake's flood level.

Allen Taylor's first locomotive

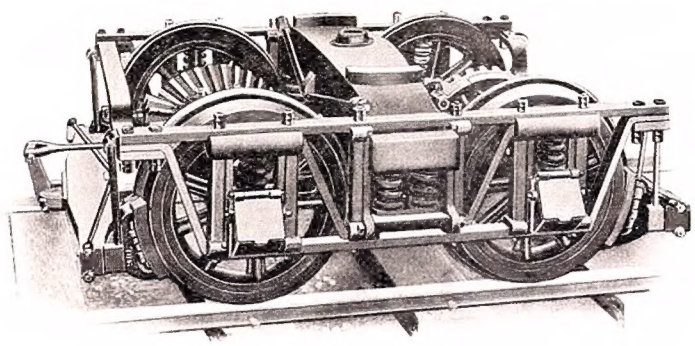
With the task of relaying the Wootton line with steel rails well underway, an order was placed in December 1914 with the Climax Manufacturing Company of Philadelphia, USA for a small wooden-framed A-Class Climax geared locomotive. The cost of the engine and associated running gear came to £3000. In late May 1915 the Climax, B/No. 1297 of 1913 [14] duly arrived at the Mayers Point wharf via one of the steam log punts. After unloading, it was re-assembled and commissioned by the company's Pyrmont engineer, George Ellis. Finally and with due ceremony both the line and the new locomotive were officially commissioned on 26 June 1915. The Climax was named *Aleda* in honor of Sir Allen's Taylor's wife.

Aleda was a standard light-weight Climax production locomotive weighing in at just 14 tons. Two 7½in diameter inclined cylinders drove a centrally located cross shaft. A crown and pinion bevel gear arrangement on this shaft allowed for the selection of either a low range 9:1 gear ratio for low speed work or a high range 4.5:1 gear ratio for higher speed operation. Power was transmitted to each of the four axles via a longitudinal line shaft driving crown and pinion bevel gear sets. Maximum speed in low range was 6mph, and in high range, 10mph. With boiler pressure set at 160psi the

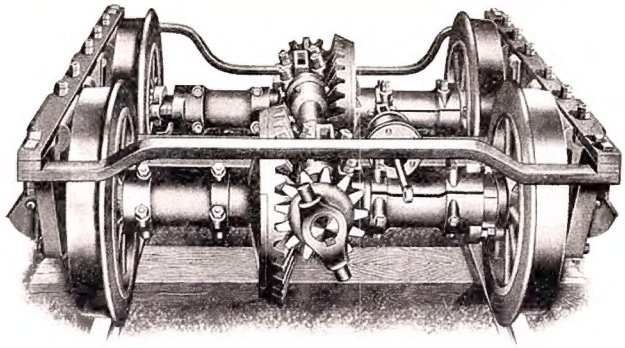




A-class Climax Aleda *(1297 of 1913) was the first of Allen Taylor & Company's steam engines. It was a 14-ton wooden-framed type purchased new in 1915 and named after Sir Allen Taylor's wife. Here the loco crew and a brakeman pose for the photographer on a small trestle bridge near Wootton. Photo: Vic Newell* ❒ *The A-class Climax engine unit was a high-speed 2-cylinder upright marine-type steam engine. It was simple, rugged and reliable. There was a 2-speed gear arrangement connecting the engine unit to a longitudinal line shaft. There was also a neutral position which allowed the locomotive to free-wheel down hills.* ❒ *The success of Climax locomotives was partly due to their patented steel arch bar 4-wheel bogie. These featured individual springs over each journal bearing which enabled the axles to move up and down independently on rough track.* ❒ *The ability of Climax locomotives to apply a high tractive effort was due to the fact that all axles were driven. Power was transmitted by the line shaft pinion gears to axle bevel skew gears on the axles. This applied equal power to each wheel and equal traction to each rail while still allowing the bogie to pivot freely. Three photos: Climax Patent Geared Locomotive Catalogue*



Side View of Geared Truck.



End View of Geared Truck, Showing the Adjustment of Gears.

tractive effort was rated at 13,200lbs in low gear and 6600lbs in high gear. The simple design of the A-Class Climax allowed it to be made and sold for a cheap price, and it could operate on very poor track. This made it an attractive proposition to Allen Taylor & Company.

Company officials were pleased with *Aleda*'s performance, which was several orders of magnitude better than the horse traction it had replaced, although its overall performance did not meet with Sir Allen's expectations. He had envisaged the locomotive making two round trips between Wootton and Mayer's Point per 10-hour day, a total distance of over 32 miles. But *Aleda* was only managing one round trip per day unless overtime was worked. This was partly due to *Aleda*'s low average speed of 5mph, with any attempt to run faster causing excessive wear to the bevel gears. And for safety reasons, slower speeds were a necessity on the Wootton tramway given its lightweight rails, sharp curves and steep grades against the load. But the biggest problem was the time it took to load timber onto the waiting train. In addition to the main log hauler depot, bullock teams and sleeper cutters delivered timber to wayside loading points scattered along the tramway. This was summed up by Sir Allen in June 1918:

I fear through the loading difficulty at so many depots we do not get the best results from either loco. For instance when I arrived at Wootton on Friday last about noon the loco was late in coming through. She was at the depot at 1pm and did not leave that depot until 5pm that evening. In other words the traction power was held up. This loading difficulty is one that none of us can seem to solve because the depots are so scattered that it is not possible to have any set facilities at any one of them whereby the detention of the loco can be reduced. If the whole of the staff could be accumulated into say 3 depots in place of about 40 there would be no difficulties.

Two years after entering service, *Aleda* suffered severe damage in a bad accident that occurred during a descent of the notorious O'Brien's Hill on 26 October 1917. Apparently the brakes failed, causing loco and train to descend the hill out-of-control before derailing and overturning, injuring the crew. Sir Allen Taylor traveled up from Sydney to assess the situation:

The Aleda is a complete wreck, will take some weeks to get ready and will easily cost £300, apart from the loss involved. The accident to this locomotive should never have occurred; gross negligence! It might have been worse. Fortunately the men are not seriously injured and will be about again in 2 or 3 weeks. I have issued definite instructions that the brakes must always be tested prior to negotiating O'Brien's Hill either way. If this course, which is a simple one, is adopted further troubles should be obviated.

The services of the loco driver involved in the accident were dispensed with and a new driver, Harry Phillips, was appointed. *Aleda* was repaired by company engineer George Ellis and was back in action on 17 December 1917. An attempt was made to strengthen the loco's wooden frames in order to reduce the wear on the bevel gears, which were needing to be replaced every 6 months at a cost of £100.

The locomotive was taken out of service for its first major overhaul in early 1922. Renewals were extensive. Most of the drive train was severely worn and had to be replaced including line shafts, crown, pinion, and bevel gears, sleeve couplings and loco wheels. Axle box and line shaft bearings were also found to be worn and either needed re-metalling or replacing. Annual upkeep of the loco was costing £700 a year.

By 1923 *Aleda*'s boiler was giving trouble, a result of using brackish lake water during dry spells. The company's Sydney engineer, C Guyler, was sent to Mayers Point to inspect *Aleda* and reported:

The boiler is very dirty around the firebox causing bad leaks around the foundation rim on the front side for nearly the full width. The rivets have been leaking also in the 4 corners. Very bad leaks, 2 in back corners. Four stays in the crown were leaking and 5 tubes leaking very badly. The tubes have been expanded several times and the stays have been caulked and kept tight for a time but owing to dirt in the boiler they will not keep tight. The boiler otherwise is quite good.

I reckon the boiler be taken out and the foundation rim lifted up and kept clear of defective parts. While this is being done the boiler could be cleaned out thoroughly and when completed could last for some years with careful attention. Most of the trouble is caused by using brackish water which is forming scale on the plates causing the parts affected to leak.

A-class Climax Aleda *(1297 of 1913) at the head of a sleeper train in the Wootton forests. The lightweight* Aleda *could pull a heavy load but was slow, averaging only 5 mph on the trip to Mayers Point with loaded trains.* *Photo: Vic Newell*

Owing to the construction of the boiler it is impossible to clean it out thoroughly but while repairs are being affected this could be done and so give the boiler a new lease of life. I estimate repairs would take 14 days after arrival in Sydney, 9 days to erect for work. Estimated cost £375 to £400.

Aleda's boiler repairs were duly carried out and the loco was returned to service. It continued as the mainstay of the Wootton Tramway's motive power until a new A-class Climax was put into service in September 1927. *Aleda* was relegated to secondary status and whenever there was a downturn in the timber trade, it was the light-weight, wooden-framed *Aleda* that sat it out in the Mayers Point engine shed.

To be continued…

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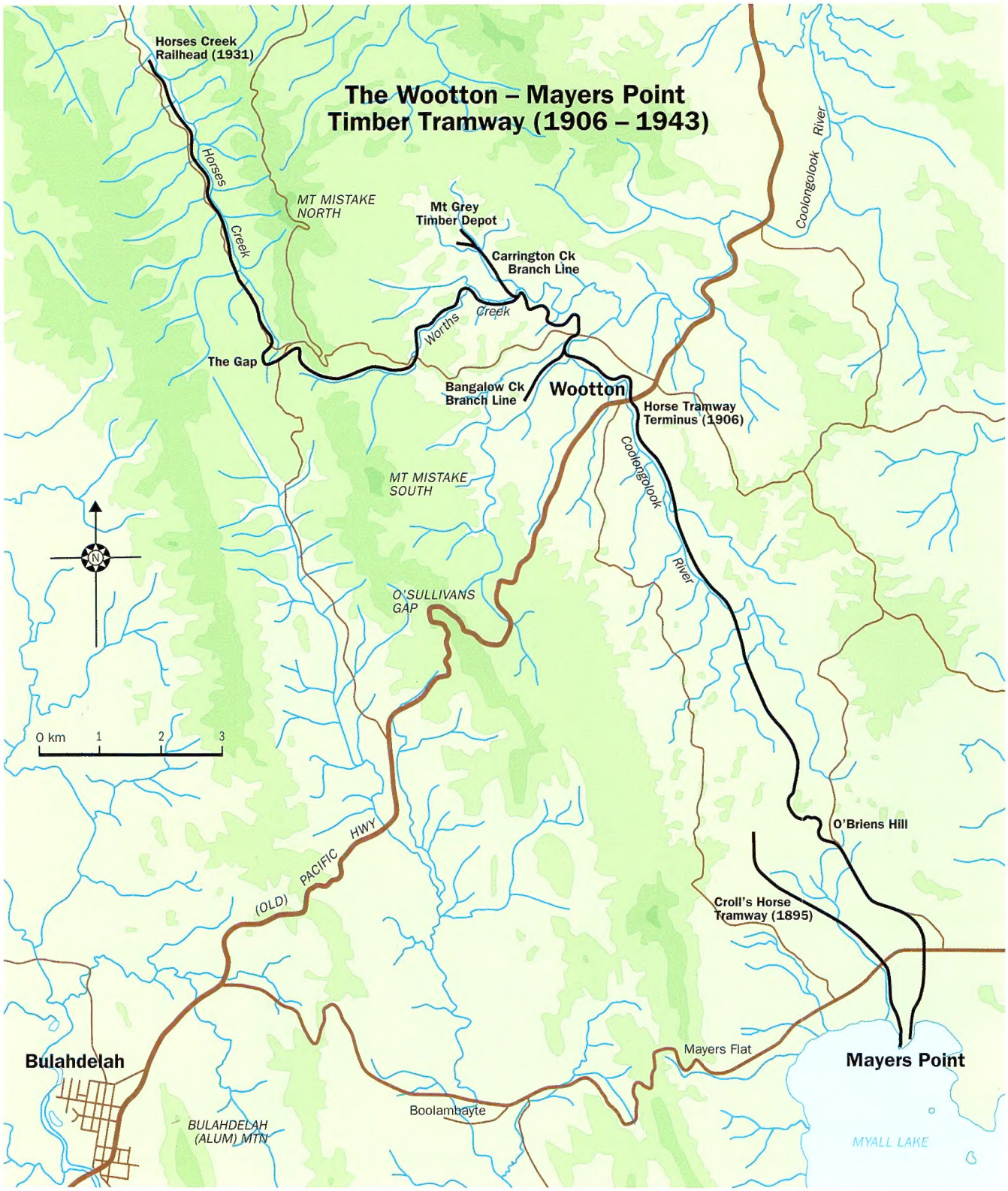


Narrow gauge track still embedded in the concrete along the Quarry Road, 26 May 2006. The hand winch mounted on the concrete block can be seen in the middle distance of the 1960 photo looking in the opposite direction past the Machine Shop. *Photo: Peter Neve*

Concreting Woronora Dam

by Jim Longworth

Woronora Dam, located on the Woronora River just to the south of Sydney, was built to supply drinking water to Sydney's southern suburbs in the Sutherland-Cronulla peninsula, and supplement the Upper Nepean Scheme whilst Warragamba Dam was being built. Like the dams of the Upper Nepean, Woronora sourced good quality water from a largely undisturbed catchment of native vegetation growing on a rugged sandstone substrate.

Woronora Dam is a curved gravity dam constructed with cyclopean masonry and mass concrete. It has a zig-zag spillway 152.5 metres wide to increase the discharge rate, located in an impressive spillway trench. Woronora Dam shares technological similarities with Nepean Dam. Both were constructed using a mass concrete gravity technique which was commonly used in dam construction prior to the Second World War. Subsequently, concrete gravity technology was superseded by the complex engineering principles used in the Warragamba Dam scheme between 1947 and 1960.

As at Cataract, Cordeaux, Avon, and Nepean dams,[1] light railways were used extensively in construction work at Woronora.

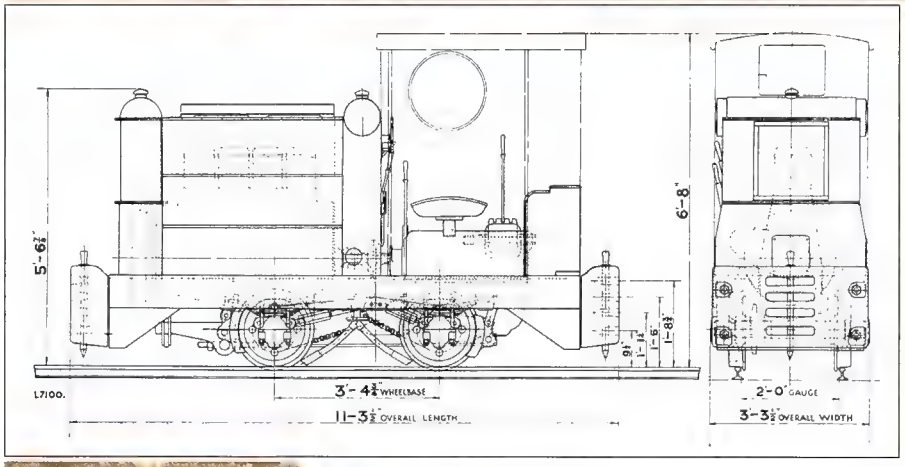
Phase One, 1927-1930

Woronora Dam and the pipeline to Penshurst Reservoir were designed by the Metropolitan Water Sewerage and Drainage Board (MWS&DB) in conjunction with the Public Works Department (PWD). It was the first dam built entirely by the MWS&DB, after the transfer of the construction division from the PWD.

Construction of Woronora Dam began in January 1927. The Lidgerwood cableway, previously used at Chichester Dam in the Hunter Valley, was relocated to the Woronora site and converted from steam to electric drive. Rock crushing and concrete mixing plant was installed, and blue metal and sand bins were constructed, as were cement sheds, conveyors, and elevators. Work during the initial 1928-29 period included stripping of the quarry and winning a small quantity (10,500 cubic yards) of stone for use as displacers and spalls.

By the middle of 1929, 2ft gauge railway tracks for transporting the spalls and displacers from the quarry to the crushers and cableway were nearing completion.[2] Tenders had been called for the supply and delivery to the dam of 24 side-tipping trucks.[3] JE Toole & Company successfully tendered for the contract with delivery to be within four to five weeks.[4] The company's quotation of £636 was based on using British steel plate, with the balance to be of Australian manufacture. William Thornley & Sons' tender of £288 for manufacturing twelve sets of 2ft gauge points and crossings (from 45lb rail) together with operating gear, was also accepted.[5]

On 16 December 1929 two standard gauge sidings were brought into use at the nearby Waterfall railway station, being



Looking along the worksite towards the dam wall. 27 August 1960. Photo: Peter Neve • Main dimensions of the Ruston & Hornsby Class 44/48 HP locomotive, from an information leaflet published by the company in 1937 • Looking along the Quarry Road, towards the spillway (around the corner to the left in the middle distance), 27 August 1960. The 4-wheel flat wagon bears a striking resemblance to those used previously on constructing Cordeaux Dam. Photo: Peter Neve

known as 'No.1 and No.2 Water Board Sidings'.[6] The sidings were primarily used for transshipping stores and materials from rail to road motor transport for carting to the construction site. A shed for storing cement out of the rain, and a shed for storing general goods were also provided at the sidings.

The onset of the Great Depression resulting in construction work being suspended in March 1930.[7]

Phase Two, 1935-1941

Construction work on the dam was resumed in November 1935. Initial work included overhauling the plant, reconditioning residential buildings, the workshops, stores, stables, sheds, and the sub-station and transmission line. Originally designed as a cyclopean masonry dam, the design was altered and the body of the wall was built of blue metal mass concrete.

The new design plans meant that the on-site plant had to be rearranged. Work included pouring new concrete foundations and piers for new storage bins, crushers, and elevators. Tenders were called for 4000 4ft 6in long hardwood timber sleepers and 300 14ft long sleepers. Tenders from Smith & Woodbury of 2s 1d each for the short sleepers and from ED Pike & Company of 15s each for the longer ones were accepted. A skip hoist including a hoisting winch and motor, together with two mild steel skips, was supplied, delivered, and installed by CJ Hasemer. An additional 62 tons of 45lb rails and 311 pairs of fishplates were supplied by PWD, with 1950 bolts for the rails being supplied by Commonwealth Telegraph Supplies. New tracks were laid to the stone quarry.[8]

Two Ruston & Hornsby four-cylinder, compression ignition type locomotives were purchased for a total of £2543.[9] A cheaper offer from Frank Saunders was declined because it involved the supply of two-cylinder engines, while the R&H locomotives were equipped with more robust gearboxes and a more selective gear arrangement. Builder's numbers were 183063 and 183064, both of 1937, and they carried MWS&DB Plant Numbers 14 and 13 respectively.[10]

The tasks of the light railway were eminently simple. The principal role was to transport excavated sandstone rock from the quarry to the crusher bins at the construction site. The second was to transport stores, tools, and equipment between the stores and workshops and construction site. Concrete seems to have been transported on a separate set of tracks from the Concrete Mixer House to underneath the cableway for lifting to the points of placement. These tracks were probably worked by draught horses purchased locally.

The dam was completed to full supply level in 1941.

Epilogue

The locomotives became part of the Board's collection of construction plant. Their operation was detailed in MWS&DB Plant Branch Operating Instruction No.572.[11] They were subsequently used by the MWS&DB in the construction of the Captain Cook Graving Dock in Sydney in 1942-4.[12] At least one was noted at Warragamba Dam during construction work there in 1953.[13]

Remains of the 2ft gauge tracks at Woronora, embedded in the concrete paving are still readily visible to visiting enthusiastic light railway archaeologists.

The encouragement and assistance of Peter Neve in preparing this article is acknowledged and appreciated.

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One of the ex-Woronora Dam locomotives, photographed later at Warragamba during construction work there. *Photo: Ken McCarthy*

The Muhlhauser bogie pipe carrier used for transporting the 12m long steel liner sections into the tunnel, seen outside the new Bogong high-pressure tunnel on 30 March 2009. *Photo: courtesy AGL*

A modern narrow gauge construction railway: the Bogong Power development

by Simon Moorhead

On 16 November 2008, the final destination of the LRRSA 'Gold and Hydro Electricity Tour' was the new power station and headrace tunnel near Lake Guy at Bogong Village in north-east Victoria. Scott Gould had made prior arrangements to visit these sites through John Arnold, Project Manager, Bogong Power Development.

Our guides on this last part of the tour were Richard Lai, principal site engineer from GHD and Michael George, geotechnical engineer from SKM. We checked in at the site office to sign the safety register and don our hard hats and vests. We then proceeded to the viewing platform that overlooks the new power station.

Here we learnt that AGL had contracted McConnell Dowell to construct a new underground hydro-electric power station and a network of tunnels for a cost of around $230 million. This power station was planned as part of the original Kiewa scheme in the 1950s but was never completed.

The project involved the construction of a pondage at McKay Creek power station, a vertical shaft under the pondage, a 6.5.km long, 5m diameter headrace tunnel from McKay Creek down to Bogong Village, a 1km long steel lined high-pressure tunnel from the headrace into the power station, the installation of two 70MW Toshiba turbine and generator sets, inlet valves, tailrace and the associated transformers and high voltage power lines. The headrace and high pressure tunnels were constructed making use of 762mm gauge railways.

We were taken on a guided tour of the power station, a huge concrete structure that would be mostly buried 25m underground and incorporating some 30,000 cubic metres of concrete. We inspected the headrace tunnel and tailrace into Lake Guy, as well as the generator settings, transformers, control room and 165 tonne overhead rail crane. The discharge from the station would be below normal water level as the turbines were designed to have back pressure to minimise noise and disturbance to the lake.

Unfortunately all the 762mm gauge track utilised during the excavation of the high-pressure tunnel had been removed a month prior to our visit. It was soon to be reinstated on a precise alignment to facilitate the lining of the tunnel with steel, as the overburden would be insufficient to contain the pressure.

A critical aspect of the design was the connection into the main electricity grid. This was to be achieved by underground cables crossing under Lake Guy near the tailrace and linking to the existing 220kv overhead transmission lines coming down from McKay Creek.

AGL was not permitted to widen their easement and run a separate new power line. Instead, the underground cables were to be connected directly to the McKay Creek line. This would raise the temperature of the existing line to over 80 degrees centigrade, necessitating the re-tensioning of each span to remove an extra metre of sag due to the additional heating of the conductors.

Above: *The Clayton 4wDH and personnel carrier.* ***Left:*** *The F&M Baldwin 4wDH rack loco under repair.* ***Below:*** *The 8-wheel cement carrier and spraying tender. All photos: Simon Moorhead*

A view of the tunnel entrance. The flat car in the foreground has several cutters from the TBM. The locomotive centre is the Clayton and the white one on the right is the Plymouth. *Photo: Simon Moorhead*

After our tour of the power station we were taken up the hillside to the headrace tunnel access portal, a few hundred metres past Bogong Village. A number of locomotives were in the yard, together with various items of rolling stock and track work associated with the tunnel boring.

A special tunnel boring machine (TBM) had dug approximately 5km underground, with around 1.5km still to go before it reached the end point underneath the McKay Creek power station, some 18 months after starting. We were only allowed to wander a few hundred metres into the access tunnel and consequently we were unable to see the TBM, since it was deep underground.

The TBM was made by Robbins in the USA and refurbished by Herrenknecht in Germany at a cost of some $12 million. It weighed 400 tonnes and had a 5m diameter, circular cutting head which rotated with numerous cutters to chip off the rock as it pushed forward powered by hydraulic rams.

The main part of the TBM was 30m long and had a series of modules attached behind, containing staff amenities, first aid room, transformers and gantries, taking the length to around 140m. The TBM was using water to assist with cutting and to dampen down dust. A small spoon drain was being installed along the bottom of the tunnel to remove the waste water to the entrance for recycling.

The broken rock was being scooped up by the TBM and taken out by a continuous conveyer belt all the way back to the tunnel entrance and then to a mullock heap beside the Bogong High Plains Road. The mullock was being used to surface 37km of the road between Falls Creek and the Omeo Highway to provide greater tourist access to the area and was also to be used to re-bury the power station once it was completed.

The TBM was powered by an 11kv three phase cable which extended in continuous 300m lengths. Once the end was reached, another 300m of power cable was added like a giant extension cord. Much the same happened with the conveyer, except a concertina mechanism was used to manage the tension on the conveyer as the TBM moved further away from the entrance.

The TBM head entering the tunnel *Photo: courtesy AGL*

The TBM had auto-transformers on-board which dropped the voltage to 1Kv and 415v for the various motors and hydraulic pumps. The 762mm gauge track and overhead ventilation system was also extended behind the TBM to facilitate access and maintenance.

Like most drilling machinery, the TBM was fitted with a number of hardened steel cutters which were blunted by the rock hardness of around 200MPA. These cutters looked like giant spinning tops and weighed 135Kg each. The TBM could be retracted about 1.5 metres from where it stopped. Then an operator had to climb through an inspection hatch and change the cutters with a block and tackle, after the geologists gave the OK that the rock face was stable.

This TBM was to be abandoned underground once the tunnel reached the required length. This was because it was not intended to dig through to the other side of the mountain (as with say a road tunnel) and the TBM was unable to travel backwards out of the tunnel as the concrete lining reduced the tunnel diameter behind it. So essentially it was to be driven past the endpoint, stripped of all useful items that could pass back over the railway and concreted into its final resting chamber.

Inside the TBM tunnel where the profile is circular due to the cutting of the TBM. The sleepers are curved for this purpose.
Photo: courtesy AGL

The following web sites provide detailed information on TBMs for those who are interested:

www.herrenknecht.com/process-technology/machine-technology/single-shield-tbm.html

www.robbinstbm.com/products/tunnel/main_beam.shtml

There were a number of diesel locomotives in the yard including an F&M Baldwin, 4-wheel diesel hydrostatic ex-rack loco under repair. We also saw a large Plymouth 4-wheel diesel hydraulic which is believed to have been purchased from Mining Equipment, of Durango, Colorado [see report in LR205].

The smaller loco in the yard was believed to be a 4-wheel Clayton diesel. Inside the tunnel was an F&M Baldwin 4-wheel diesel hydraulic which had been fitted at Bogong with water jets between the wheels, to wash the muck of the rails. This was required to avoid any more runaways, which apparently occurred early in the project.

Interesting rolling stock included several cement carriers and a spraying tender for lining the tunnel with concrete, mobile rock drills for installing rock anchors, personnel carriers and various flat cars for transporting refurbished cutters etc. to the TBM.

Inside the drill and blast tunnel with the rail laid on grade; later this rail was lifted, the invert cleaned, blinding concrete placed and the rail re-laid. *Photo: courtesy AGL*

The tour ended around 3pm with Richard and Michael providing everyone with some souvenirs and cold mineral water courtesy of AGL. It would be fair to say that everyone who attended this tour was overwhelmed by the hospitality of our hosts and awed by the amount of interesting information provided.

Special thanks go to Scott Gould who researched, planned and executed a sensational tour. Also thanks to Richard Lai (GHD) and Michael George (SKM) who made this day one that will be remembered for quite some time.

Thanks to Scott Gould, Phil Rickard, Terry Elliott and Owen Gooding for assisting in preparing this article. Scott would also like to thank Phil Rickard, Bill Hanks, Colin Harvey, Peter Evans and Stuart Thyer for helping organise this, his first tour.

The LRRSA group entering the headrace tunnel. Photo: Terry Elliott

An early example of two horse-drawn log trains on fully-decked sawn timber track, thought to be crossing a bridge over Rileys Creek on one of the 4ft gauge lines of the Liverpool & Honeywood Tramroad Co. The whole length of track visible is elevated on pigsty piers, and the relatively easy curvature has allowed some springing of the rails, and thus kept the degree of faceting to a minimum. Compared with many timber-railed systems, this is therefore of a relatively high standard. The pigsty piers are shown in some detail in the inset photo, and the wheels, although wider than railway profile, are not as wide as the later spar wheels. The two photographs were taken of the same pose. Photos: unknown c1880

Old wheelsets and their stories

by Scott Clennett

Over the last eight years or so, I have been on many field trips as part of research into a history of the timber mills of Tasmania's Southern Forests, and their associated bush tramways. These have taken me over much of the country between Cockle Creek at the southern end of Recherche Bay, northwards through the Lune, Southport and Port Esperance districts, to Geeveston and Franklin, as well as to Garden Island Creek (near the Huon River mouth), and across the D'Entrecasteaux Channel to Lunawanna and Adventure Bay on South Bruny Island.

The area is rich with unfortunately fast-disappearing physical evidence of a thriving industry that worked these forests for nearly 150 years, generally in a sustainable way. As many readers will know, with the exception of the Garden Island Creek area, this history was well documented in the 1990s in a series of reports on the Archaeology of the Tasmanian Timber Industry on behalf the Tasmanian Forest Research Council by archaeologist Parry Kostaglou. It is recognised that much of the background data included in those reports was researched and provided by Wayne Chynoweth.[1]

In the course of these field trips, I came across a significant number of wheelsets, either lying in the bush, on machinery dumps or, in some cases, on display. Some of them were just isolated sets, others were still part of old assemblies: attached to frames, bogies, locomotives or the like. It could be said that each has its own story to tell, but it was also clear to me that in the overall, they could shed a lot of light into the nature and technology of the tramways over their long history. From them, I was able to postulate on various gauges, types of track, relocations of locomotives and bogies etc, and develop relevant arguments put forward in my forthcoming book.

In this article, I attempt to document at least some of these wheelsets and their significance; and in some cases raise a few questions.

As a background, the use of tramways for timber harvesting and coalmining in the Southern Forests began in the early 1840s with the establishment of a Convict Probation Station at Southport, some fifty miles by water from Hobart Town. Government Surveyor Latrobe reported in 1847:

The supply of all description of timber here is inexhaustible. Iron tram roads are laid down in different directions, so that the conveyance of timber to the waters edge is performed without any difficulty.[2]

As a more pioneer-driven timber industry developed, so did an eclectic collection of tramways, with lines moving further and further into the bush from literally dozens of mills. I have covered some of the history of about 60 such systems, and identified over 500 km of routes in my book, but there were many more, smaller mill trams which would have added to that total. There were also other systems on the periphery of the area covered. Not all of these lines were concurrently extant: there were often several generations of timber harvesting in an area, and old routes would be crossed,

or even followed by later ones. It would be true to say that without these systems, the industry would not have existed, at least not to nearly the same extent. They were to operate well into the 20th Century, with the last of them being abandoned with the 'modernisation' of the 1950s.

In broad terms, the tramways fell into a number of categories, depending on rail type, traction, and general sophistication. Some were very crude, while others, particularly those of the two 'super mills' of 1901-02, at Hopetoun on Port Esperance, and at Geeveston up the Huon River, were well engineered to the extent that they would have almost qualified as railways.

Essentially there were three basic types of track, with a number of sub-types:

1. Sawn timber rails, occasionally with iron or steel sheathing. Typical timbers were those being exploited by the mills themselves, mainly stringybark, (*e.obliqua*), swamp gum (*e.regnans*) and blue gum (*e.globulus*), and typical sizes were 5in x 5in or 6in x 4in. Because it was difficult to spring timber of such sections, curves were usually constructed by 'faceting' straight lengths, with the joints in opposite rails often staggered, resulting in an ever-varying gauge. Thus broad-barrelled wheels were usually required to avoid the wheetsets falling into the 'four-foot'. Unlike the spar-type, however, the rails would have a reasonably defined gauge-corner (subject to the degree of wear), and thus the wheels could have relatively small root radii between barrel and flange.

2. Spar rails: timber spars cut from the surrounding forest, and varying in diameter from, say, 6in to 12in or even bigger, even along their own length. They were rarely straight or clear (free of knots etc), and were therefore even more difficult to spring around corners than were sawn timber rails. Consequently such trackwork was subject to an even greater gauge variation, requiring even wider barrelled wheels, up to as much as 14in-16in, and their large radius (effectively forming their gauge corners) not only made gauge difficult to define, but meant wheels had to have compatibly large root radii. The term 'root radii' is used here with some licence, as the curve was usually more of a developed or transitioned geometry, with the included tangent angle of the curve being relatively open to avoid the wheels riding on their flanges, up and over the top of the spar. In some parts, these wheels were known as 'bell-wheels', but, I have used the alternative term 'spar-wheels' as being more appropriate in this context. Note that spar-wheels could be run, at least with some care, on timber or steel track, although steel-track frogs and crossings could be difficult to negotiate.

This photograph, dating from c1975, shows a section of abandoned tramway running southwards from Cockle Creek along the Blowhole Valley. It gives a good idea of the crudeness of spar track, particularly of the irregularity of the spars themselves, of the discontinuities in the track, and of the wide spacing of the bed-log sleepers. Photo: Wayne Chenowyth

Another example of spar track, this time carrying a tractor locomotive with a driven log-bogie propelling a very long log along an elevated pigsty section. It is on the remarkable Pebbly Bight line out of George Heather's Cockle Creek Mill, a line that was built by George, two teenage daughters and two younger sons in five months at the end of World War II. The open nature of the construction would certainly not have suited horses, but note the confidence of the person walking along the spars behind the unit. Photo courtesy Jean Burgess (nee Heather), one of those daughters

Schedule of Wheelset Data

Location	Source	Wheel Type	Spokes Type	Spokes No.	Dim 'A' Ins. flanges	Dim 'B' O'all width	Dim 'C' Min dia	Dim 'D' Max dia	Dim 'E' Width	'R' (min root rad)	Gauge [deduced]	Notes	Date visited
Southport	Robert Hay's Mill	spar	spiral	6	48.00	60.00	13.50	21.25	6.00	5.00	4ft 6in	Part of old mobile boiler assembly beside road	Sep.06
Ida Bay Station	Leprena Mill?	spar	scallop straight	6	43.50	63.50	14.25	20.00	10.00	5.00	4ft 6in	In station carpark. Marked "2648 RUSSELL ALLPORT (& CO?) ENGINEERS HOBART"	Jul.09
Ida Bay Station	Leprena Mill?	spar	spiral	6	42.50	60.00	18.00	21.50	8.75	3.00	4ft 6in	Displayed in station carpark	Jul.06 & Jul.09
Ida Bay Station	Ida Bay Railway	railway	semi-solid	5	21.25	28.75	18.00	21.00	3.75	1.00	2ft	Displayed in station carpark	Jul.09
Moss Glen	Leprena Mill	timber	spiral	6	50.50	65.00	23.50	28.50	7.25	0.50	4ft 6in	On display on bank above Cockle Creek Road. Fitted with 16.5in diameter gear on axle	Aug.06 & Jul.09
Light Railways 40 Winter 1972	Leprena Mill precinct	timber?	not noted	not noted	52.00	65.50	not noted	not noted	not noted	not noted	noted as 54in (4ft 6in)	Measured at Leprena by Ray Graf in 1971 (see sketch in LR 40, p.20) *See note 5, below.*	n/a
Barnett's Mill, Lunawanna	Big Mill	spar	spiral	6	In overgrown display at entrance to mill.Measurements taken considered unreliable & gauge deduced only.						4ft 6in	Pair of sets in bogie, probably rear bogie from 'Super Sentinel'. Larger wheels of two types.	Nov.05 & Mar.07
Harvey's Spur	Bennett's Arve Road Mill	spar	not noted	not noted	No measurements taken other than nominal gauge.						3ft 6in	Several sets at abandoned tramway & log landing site at end of Harveys Spur	Oct.03
Dover Mill	Arve River & Raminea Mills	spar	straight	6	36.00	60.00	21.00	26.00	12.00	5.00	3ft 6in	Front set from 'Cadillac' ex Arve Mill, to Raminea in c1954	Oct.03, Aug.06 &Jul.09
Dover Mill	Raminea Mill	timber	solid	na	38.25	52.25	23.25	27.50	7.00	0.50	3ft 6in	On 'Byers' bogie, later used as driven bogie on 'Caterpillar'	Oct.03, Aug.06 &Jul.09
Dover Mill	Raminea Mill	timber	semi-solid	5	39.50	50.50	19.25	23.25	5.50	0.50	3ft 6in	Origin unclear, but probably related to 'Byers'	Aug.06 &Jul.09
Dover Mill	Unknown	spar	scallop straight	6	37.50	58.00	14.50	19.50	10.25	5.00	3ft 6in	Steam log hauler, history not known	Aug.06 &Jul.09
Triabunna	Lune River & Raminea Mills	spar	scallop spiral	6	36.00	56.00	21.50	26.00	10.00	1.50	3ft 6in	'Fordson' plinth outside Forestry offices. Mark 'ALLPORT & CO ENGINEERS HOBART'	May.05 & Jan.06
Triabunna	Unclear (Raminea?)	spar	straight	6	38.00	61.00	14.50	19.00	11.50	1.50	4ft 6in	On first display bogie with 'Fordson' at Triabunna	May.05 &Jan.06
Triabunna	Unclear (Raminea?)	spar	scallop straight	6	43.00	64.00	14.50	19.00	10.50	4.00	4ft 6in	On second display bogie with 'Fordson' at Triabunna	May.05 &Jan.06
Rileys Creek Road	Unknown	hybrid	not noted	not noted	38.00	59.00	15.50	21.00	10.50	5.00	3ft 6in	On display outside house. Origin unknown (see text)	Aug.06 &Jul.09
Slide Track, Bruny Island	Possibly from haulage	railway	straight	6	Wheelset not measured except for gauge						3ft 6in	Beside old 'Slide' tram, near Mangana Bluff. Not suited to timber or spar track (see text)	Nov.05
Tasmanian Transport Museum	Tyler's, Hastings,& other Mills	timber	spiral	5	38.00	54.00	23.00	26.00	8.00	0.75	3ft 6in	Oliver/Markham coffeepot loco of 1889, new to Tyler's Ida Bay Mill, to Hay's Hastings 1898	Jul.06 & Jun.09

Explanatory Notes

1. All dimensions are quoted in inches, except for gauges which are quoted in feet and inches. Actual field measurements were taken in either metric or imperial units, and converted to the nearest quarter-inch.
2. While every endeavour was taken to ensure accuracy of measurement, this varied according to difficulty of access, light etc, or where frames, axles or other elements in a locomotive or vehicle interfered. Particular difficulty was experienced with the sets at Southport and at Barnett's Mill. (And with leeches on the Slide track!)
3. Wheel types are quoted based on their general profile as either 'spar', 'railway' or 'timber', according to their suitability for the various track type. While there was often compatibility, timber or railway types would generally not suit spar track, railway types not suit timber track, and spar wheels would have difficulty with frogs etc on railway track.
4. While gauges of wheelsets with timber or railway type profiles are reasonably easy to determine, those for spar type sets are rather less precise, This is due to the irregularity of spar rails, their large diameter, and thus large and varying gauge corners, and track curve-facetting; hence their wide wheels and large root radii. Such gauges quoted are 'nominal'.
5. Following a visit to Leprena Mill precinct in 1971, Ray Graf noted in LR 40: "*...I found a four-wheel truck, the wheels of which I measured... The two axles each had a sprocket on them, but on opposite ends*" The presence of these sprockets, the similarity of measurements and of the general wheel profile with the Moss Glen wheelset (above), could indicate that this truck was from the Leprena locomotive. Note that the variations in measurements could be explained by the difficulty in measuring wheelsets while still fixed to a truck frame etc. Alternatively, it may indicate that the wheelsets in the different trucks from that locomotive varied slightly, a not unusual circumstance in such a hybrid unit

3. Steel, generally flat bottom rails, although there was some evidence of the use of T-rails at the Catamaran coalmine, probably coming from the Sandfly tramway. Sections were usually no more than 40 lb/yd, and often less. These allowed more normal railway type trackwork, and the use of railway profile wheels. On the tramways of the two super mills, and to a degree at Raminea, this often resulted in quite a high standard track. Steel rail was also often used in otherwise timber or spar lines where additional safety was sought, such as on bridges or on particularly risky sections of track, or where freer running was needed where free-wheeling wagons were taken over flatter grades. An advantage of steel rails was the relative ease with which they could be relocated. At Raminea, for example, many rails were used at least three times as the harvesting areas changed.

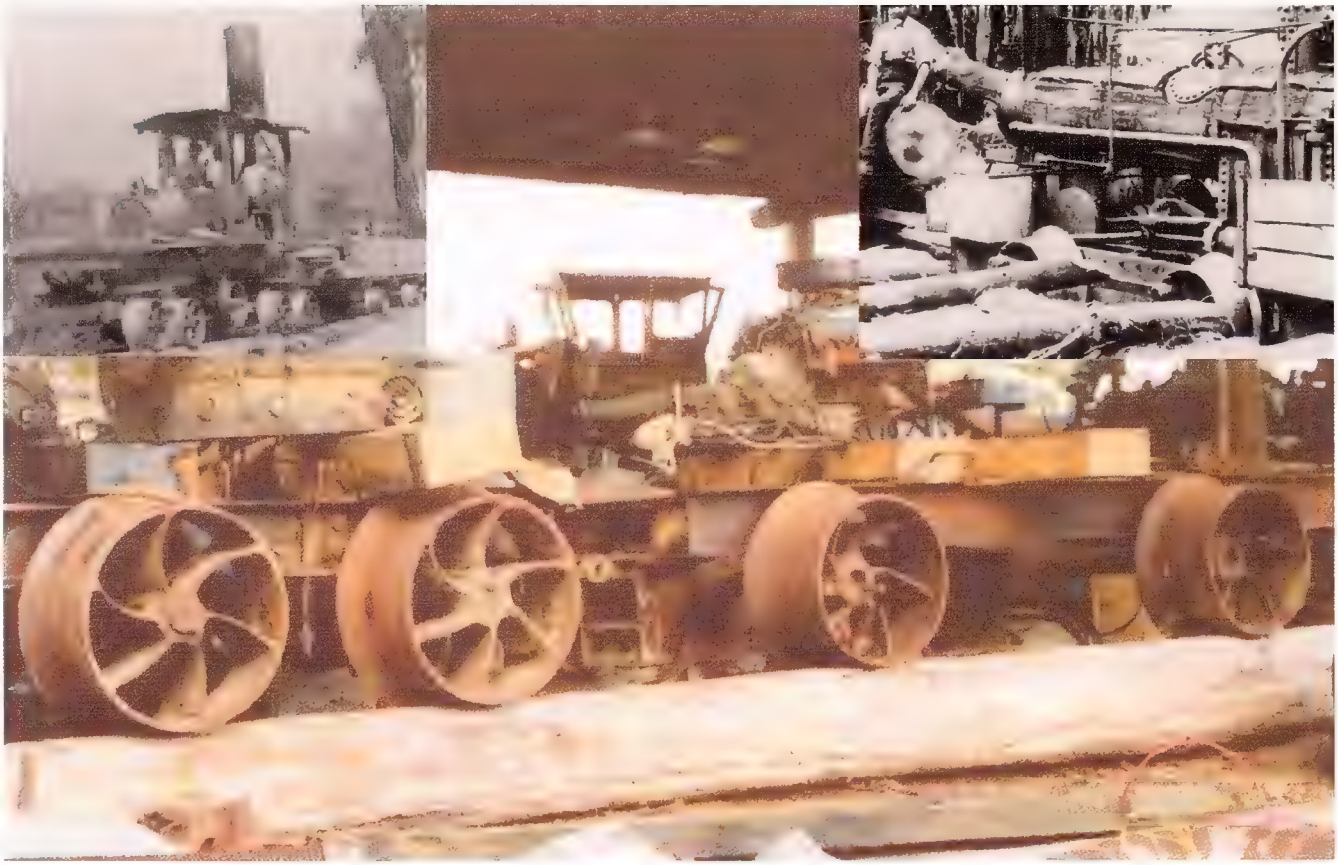
Construction of the track, particularly of the track-bed, depended largely on the type of traction used. In the early days, and even to the end with some systems, traction was by horses or sometimes bullocks, and so a satisfactory base was required for their hoofs, one which would not turn to mud in the often wet weather. In some areas, ballasting and thus pavement material was available locally, but, in the main the track would be decked with transverse split or sawn timber 'slabs'.

Where mechanical traction was available, (steam, petrol or diesel) there was no need for a roadbed for horses, and more open trackwork would suffice. Ironically this meant that the more crude spar track generally came later than sawn timber track, although the two co-existed one way or another throughout. The Pebbly Bight line from the Cockle Creek Mill of George Heather, for example, was built as late as 1944-45 using spar rails elevated over significant distances using pig-sty construction. In effect it was totally open, and could never have accommodated horses. Support of the spars would often only be directly on bed-log sleepers, or on pigsty cross members, in relatively wide or even over-wide spacing. At least one death, at Hastings in 1904, was caused when an over-long spar broke while a log wagon was being freewheeled over it, and there was at least one other similar fatality, at Garden Island Creek in the 1930s.

In my book, I cover in some detail the history of the mills and their tramways, locomotives etc, and put forward some arguments regarding technical issues. In this article I have included a schedule (page 20) prepared from the details recorded of the wheelsets encountered, and a series of photographs which I trust will be of interest to the reader.

Endnotes

1. *Archaeology of the Tasmanian Timber Industry*, Kostaglou P., Tasmanian Forest Research Council and Forestry Tasmania
   - Report No 4: *Historic timber-getting between Cockle Creek and Lune River*, Block 1;1994
   - Report No 5: *Historic timber-getting between Hastings and Dover*, Block 2; 1994
   - Report No 6: *Historic timber-getting between Glendevie and Franklin*, Block 3, 1995
   - Report No 7: *Historic timber-getting on Bruny Island*, ; 1996
2. Latrobe's report on Southport, 1847, as quoted by Kostaglou, P. *Archaeology of the Tasmanian Timber Industry*, Report No 5, 1994



This montage of three poor-quality photographs, all taken at Lunawanna on Bruny Island stretching over about 70 years, tells an important story. At top right is an extract from a photograph of the old Skinner & Jolley Mill's locomotive which arrived from Robert Hay's Southport Mill (possibly via Strathblane) in c1908. At top left is the fearsome "Super Sentinel" of the successor Clennett "Big Mill" in c1935, and the main photograph is of a display of old vehicle parts from the Big Mill at the nearby Barnett's Mill, and dates from about 1980. The display is still there, without its roof, but so overgrown by blackberry bushes that getting a sensible up-to-date photograph was impossible when visited in November 2005. Nevertheless, a few indicative (if scratchy) measurements were made. A close study of the wheels proved interesting. Those of the older locomotive would seem to re-appear as the front (far) bogie pair on the Sentinel, and then again as the right-hand pair in the display, while the rear pair of the Sentinel are almost certainly the left-hand pair in the display. The result is an important link between different mill systems, and thus their gauges. *Main photo courtesy Bev Davis, others unknown*

Left: *An old boiler lying on the ground at the site of Robert Hay's mill at Southport, under which lie the rotted out remains of a timber frame and a rusty spar-type wheelset. The boiler was originally fitted to ex-TMLR locomotive No 17, later TGR No D+1, but after replacement in c1902 was mounted on this frame. It was then used as a mobile boiler for a log hauler on the mill's system for some years. The wheelset was difficult to both photograph and measure, but it proved important in establishing the gauge adopted on many of the tramway systems. This unit was almost certainly the one shown in Kostaglou's 1994 Report No 5, Plate 6, and incorrectly captioned as a 'loco'. Also indicated in that Report was the presence in the immediate vicinity of a number of other wheelsets (perhaps six in number) which had been 'souvenired' by the time this photograph was taken 12 years later. Perhaps the reason for the survival of this set was that it would have been too difficult to remove, or perhaps it was just not noticed. Photo: JS Clennett, Sept 2006*

Right: *This photograph shows one of a number of wheelsets on display marking out the edge of the car park at the Ida Bay Railway station, just south of Lune River. There are six in all, including pairs of two distinct types with spar wheels, all four of nominal 4ft 6in gauge. Anecdotal evidence is that these were 'salvaged' from the Leprena mill precinct; Kostaglou notes (Report No 4) that there were many sets lying in the water alongside the Leprena wharf in 1994. However, it is possible that one pair came from elsewhere. The other two are 2ft gauge railway-profile sets, and clearly relate to the Ida Bay railway itself. The spar set shown and its pair are marked '2648 RUSSELL ALLPORT ENGINEERS HOBART'.* *Photo: JS Clennett, August 2006*

Left: *The other type of the spar-wheeled sets at Ida Bay Station: This differs from the first type in that it is narrower in wheel-width (8¾in rather than 10in), is flatter in profile, and has spiral rather than straight spokes. The inset at bottom right shows one of the 2ft gauge railway sets.* *Photo: JS Clennett, July 2006/July 2009*

Right: *This wheelset is on display on the grassy bank above the Cockle Creek Road at the southern end of Moss Glen hamlet on Recherche Bay. It is certainly from the old Leprena steam locomotive, as evidenced by comparing the inset at top left. This is an extract from a well known but poor quality photograph taken of that unit when in service in the 1930s. The gear on the axle is also in keeping with that conclusion, as are its measured dimensions. It is noted that the last-built line of the Leprena system was generally of steel rails, and that that line was the only one traversed by the locomotive. This set is compatible with the 'nominal gauge' of 4ft 6in used, and while it may have been suitable for, and in fact did have to run on sawn timber rails, it would have been less than ideal for spar rails.* *Photo: JS Clennett, August 2006, July 2009*

Left: *This photograph shows two wheelsets in very similar circumstances to the one at Southport. It was taken at an eerily-preserved log landing and steam hauler site at the end of Harveys Creek spur on Bennett's Arve Mill system, west of Geeveston. The sets, two of four, may have been from an old log bogie, or may have been part of a frame of a mobile boiler for a log hauler (the boiler itself has fallen off to the left) The hauler lies alongside, and is shown in the inset at top left with its own spar wheel visible. The system was of nominal 3ft 6in gauge, and mostly of spar track. Although not specifically measured, the profile of the wheel can be discerned, with its wide barrel and large root radius. Note that the flange itself is not very prominent. The site was abandoned in c1954.* *Photo: JS Clennett, October 2003*

Right: *Although linked to the Harveys Spur landing, these shots were taken at a completely different site. The wheelset, and another one nearby, have been identified as having come from Bennett's 'Cadillac', an unusual locomotive that worked at the Arve Mill for some time before moving to Raminea in c1950. Other remains of the Cadillac are shown in the inset. After the fatal Raminea fire of June 1974, and together with other remnants of that system, it was moved to the machinery dump at a now closed Dover Mill, The wheels are clearly of the spar type, and the set was of a nominal gauge of 3ft 6in. At Raminea, the Cadillac ran on steel rails of that gauge, drawing bogies of mixed wheel-types.* *Photo: JS Clennett, August 2006*

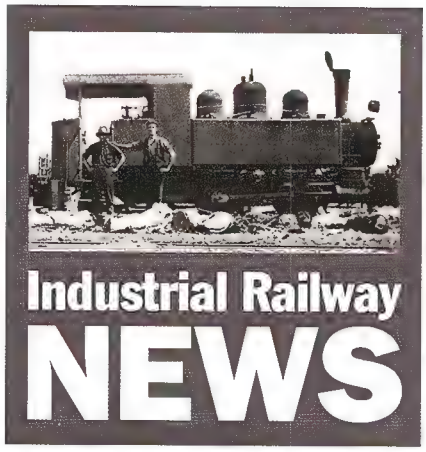
Left: *Taken outside the entrance of the Dover Mill, this shows a log-wagon display utilising an important mechanical artefact of the industry of the Southern Forests. The front bogie unit was in fact originally part of the old "Byers" which had been built in Hobart for the Raminea Mill in 1912, and was the only steam locomotive ever to work there. Some time after its retirement in the late 1930s, parts of it were used in the construction of the "Caterpillar", another in the series of eccentric units at the mill. Using one of the driven Byers bogies, the Caterpillar followed a principle used on at least four other mill tramways where the first bogie under a log wagon was connected mechanically to the locomotive by way of a shaft driven through its power linkage. The log weight thus assisted with traction. The log display was dismantled in 2005, and its elements taken into the mill property.* *Photo: JS Clennett, October 2003*

Right: *The main view is of the Caterpiller's powered bogie, now lying inside the mill property with its drawbar and power-shaft evident. The power-shaft was connected to the locomotive by way of a square hollow spline, thus allowing telescopic compensation against any shock or drag. The closer view shows the bevel gear assembly within the bogie. The original Byers bogie was fitted with a rod link between the two wheelsets (note the holes in the wheels), but this was replaced with a chain linkage in its later guise. The wheels themselves were not of the spar type, but were designed to run on either sawn timber or steel rails. Note the relatively wide barrel, and also the easy radius on the inside of the top of the flanges which would help prevent aggressive wear on timber rails. In the left background is the other bogie from the log display, with slightly different wheels, but of the same timber-rail type.* *Photo: JS Clennett, August 2006*

Left: *This black and white photograph was taken more than thirty years earlier, in 1973. It shows a distraught tractor-locomotive known as the "Fordson" lying on its side. This unit was originally built for Chesterman's Lune River Mill some time in the 1930s, and was apparently the first of five locomotives in the Southern Forests to be equipped with driven log bogies. In the foreground lies what is thought to have been the matched bogie, with its bevel gears partly showing. Spar wheels are evident on both units. The spar railed track at Lune River was of nominal 3ft 6in gauge, and when the Fordson was moved to Raminea, it was able to run on the 3ft 6in gauge steel-railed track there. It was used in the dismantling of that system after the severe floods of June 1954 effectively put paid to the tramways of these forests. Photo: W Chynoweth*

Right: *These two photographs are of an interesting wheelset sitting in the front garden of a house in Rileys Creek Road, not far south from Geeveston. In the inset can be seen what might be termed a 'secondary' flange, of a profile roughly compatible with running on steel track of 3ft 6in gauge, while its general spar-wheel type geometry should run on nominal 3ft 6in gauge spar track. Perhaps this secondary flange may be due to wear of normal spar wheels running on steel rails, but, although there is definitely evidence of wear on the running surface of the barrel itself, its is thought its distinct profile would discount that. Its origin is a mystery, but it would probably have been troublesome if run on the Huon Timber Co system or any other system that had well engineered steel frogs etc. Photo: JS Clennett, August 2006*

After rusting away at Dover for many years, the Fordson was taken to the Tasmanian East Coast in 1992, painted up, and mounted on this roadside display outside the Triabunna offices of Forestry Tasmania. But it is now without its driven bogie. Some licence has been taken with the construction of the display bogies; they are of a wider gauge, but the nesting of the wheels into the spar rails is clear. The wheelsets on these bogies are of two distinct patterns, but their history is not known. The blow-up is of the near-rear wheel of the Fordson, and shows a good example of spar wheels. Spiral spokes were not uncommon, and may have had some structural advantage. Photo: JS Clennett, May 2005



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NEW SOUTH WALES

CENTENNIAL GOLD MINING, Barrington

610mm gauge

This mine on the Copeland Goldfield is being rehabilitated and redeveloped. A 460 metre tunnel dating back to 1882 has been reopened and extended 45 metres with a rail line installed. An Eimco 12B bogger is in use as well as some interesting locomotive devices. One is a 'pusher' somewhat like a small motorised hand-controlled grass roller, while another is a nice John Deere ride-on mower conversion with a neat 4-wheel leading bogie. Some videos on Youtube (links below) show details of operation including shunting skips on the surface and hauling a rake along the adit.

http://www.centennialgoldmine.com via Phil Rickard 12/09, http://tinyurl.com/centennial-mine-1 http://tinyurl.com/centennial-mine-2

QUEENSLAND

CSR sugar spinoff

(se LR 210 p.24)

It has been announced that the name of the new sugar and renewable energy company will be Sucrogen. A meeting of shareholders is scheduled for February 2010 to vote on the demerger proposal. Following shareholder and court approval of the demerger, Sucrogen will be a separately listed company with its own board and management.

Chris Hart 12/09; *Australian Food News* 16/12/09

BUNDABERG SUGAR LTD, Bingera Mill

(see LR 210 p.24)

610mm gauge

Bingera Mill will crush in 2010 but Bundaberg Sugar will not guarantee that the mill will remain open after that. The company states that a total crush of 2 million tonnes is required to keep its two district mills open and the 2009 figure was only 1.51m tonnes.

Bundaberg News-Mail 6/11/09

BUNDABERG SUGAR LTD, Innisfail District

(see LR 210 p.24)

610mm gauge

The old Mourilyan Mill is in the process of being demolished. Baguley 0-6-0DM 10 (3390 of 1954) is out of use on the mill site, together with brake wagon RS0014, which was built using the chassis of Baguley/Drewry 0-6-0DM 2396 of 1952. EM Baldwin B-B DH *LIVERPOOL* (10385.1 8.82 of 1982) has returned to South Johnstone Mill following its rebuild at Babinda.

Luke Horniblow 11/09

CSR SUGAR (HERBERT) PTY LTD, Herbert River Mills

(see LR 210

610mm gauge

With the end of the crushing season, Clyde 0-6-0DH locomotives *CANBERRA* (65-433 of 1965) and *PERTH* (69-682 of 1969) were returned from **Macknade** Mill to **Victoria** Mill in early November.

At Victoria Mill, Clyde 0-6-0DH *DALRYMPLE* (70-709 of 1970) and EM Baldwin B-B DH *WALLAMAN* (6400.3 4.76 of 1976) are receiving major overhauls involving complete stripping down. *WALLAMAN*'s motor was removed early in November and a new Detroit Series 60 engine was in place on the chassis by 15 December.

EM Baldwin B-B DH *RYNNE* (5423.1 9.74 of 1974 rebuilt N+P 2009) was on shop bogies in early November. The wheelsets had been removed from its bogies and new seals for the final drives were being made by Hansen's in Ingham.

The second Corradini bogie brake wagon at Victoria Mill, built in 2007, should finally be commissioned in time for the 2010 season.

Ex-WAGR Walkers B-B DH MA1863 (715 of 1973) was unloaded at Victoria Mill on 12 November having been transported by road from Plane Creek Mill. MA1861 (713 of 1973) and an ex-NSWGR 73-class locomotive are expected to follow it into storage in the new year. It is anticipated that the reversing transmission from one of them will be fitted to Walkers B-B DH *CLEM H.McCOMISKIE* (605 of 1969 rebuilt Walkers 1991 and Solari 2004).

Preserved Hudswell Clarke 0-6-0 *HOMEBUSH* (1067 of 1914) was used to give rides at the mill social club annual Christmas party on 5 December.

Chris Hart 11/09, 12/09; Steven Allan 11/09

HAUGHTON SUGAR CO PTY LTD, Invicta Mill, Giru

(see LR 210 p.25)

610mm gauge

On 6 November, the bridge crane was used for the annual event of removing two spans of the Haughton River bridge in preparation for the wet season. In charge was Com-Eng 0-4-0DH *INVICTA* (CA1040 of 1960). It remains on the right bank of the river for the slack season. Also stationed on the main part of the Invicta Mill system this

Built in 1966 for Condong Mill in NSW by EM Baldwin (6/1792.1 11.66) 0-4-0DH ALBANY *now serves as the workshops shunter at Victoria Mill. Here it is with dismantled Clyde 0-6-0DH* DALRYMPLE, *(70 709 of 1970) which shows traces of its Plane Creek Mill livery, on 11 December 2009. Photo: Chris Hart*

slack season is Com-Eng 0-6-0DH *NORTHCOTE* (AH4091 of 1965), which was noted the same day at Clare depot with a bogie ballast wagon fitted with twin tip bodies.

Canegrowers have been advised that EM Baldwin B-B DH locomotives *SELKIRK* (6750.1 8.76 of 1976) and *BURDEKIN* (10215.1 7.82 of 1982) will be fitted with new fuel efficient engines and control systems for the 2010 season.

Luke Horniblow 11/09; Bill Kerr 12/09

THE MULGRAVE CENTRAL MILL CO LTD, Gordonvale

(see LR 210 p.26)

610mm gauge

The project to rebuild the Mulgrave River bridge in concrete will be completed this year, with two concrete piers having replaced the final timber section at the south end of the bridge by late December.

Luke Horniblow 12/09

NORTH QUEENSLAND BIO-ENERGY CORPORATION, Ingham

This company plans to establish a new sugar mill, ethanol and power generation plant just south of Ingham in time for the 2012 crushing season. It is planned to produce 917 tonnes of sugar, between 90,000 and 250,000 litres of ethanol and 75-85 megawatts of renewable green power per day. The company claims to have secured 2 million tonnes of cane from the 2012 crop. It is not clear how such massive tonnages of cane will be transported to the mill.

North Queensland Register 18/11/09

CSR PLANE CREEK PTY LTD, Sarina

(see LR 210

610mm gauge

On 11 November, Walkers B-B DH MA1863 (715 of 1973) left Plane Creek Mill to be moved by road to Victoria Mill. It is understood that MA1861 (713 of 1973) and an ex NSWGR 73 class will be following it. These locomotives have been stored at Plane Creek Mill for Victoria Mill since 1994, awaiting rebuilding.

On 24 November, Walkers B-B DH DH29 (611 of 1969) was noted at the mill, having arrived by road transport. This ex-QR loco is understood to have been purchased by Kalamia Mill in 1995 and has been stored since then at the Bundaberg Foundry. It presumably will now be stored at Plane Creek in the space left by MA1863.

Chris Hart 11/09; Carl Millington 11/09

PIONEER SUGAR MILLS PTY LTD, Inkerman Mill

(see LR 207 p.24)

610mm gauge

Com-Eng 0-6-0DH *ALMA* (FE56110 of 1975) has been out of use since 2002 and was noted in December with wheels removed – a sad sight. The locomotive had a running gear problem that

Top: *South Johnstone's ex- Innisfail Tramway 0-6-0DM (Baguley/RMP 3390 of 1954) stands unwanted at the old Mourilyan Mill site on 14 November 2009. Photo: Luke Horniblow* ***Centre:*** *The bridge crane at Invicta Mill is used to remove the second demountable section of the Haughton River bridge. The first section has already been removed and stored for the slack season. The locomotive is Com-Eng 0-4-0DH* INVICTA *(CA 1040 of 1960). 5 November 2009. Photo: Luke Horniblow* ***Above:*** *Stationed at Clare depot for maintenance work during the slack season is Invicta Mill's Com-Eng 0-6-0DH* NORTHCOTE *(AH4091 of 1965) on 5 November 2009. Photo: Luke Horniblow*

Top: *The sad remains of a once-proud locomotive. Inkerman Mill's Com-Eng 0-6-0DH* ALMA *(FE56110 of 1975) on 13 December 2009. Photo: Scott Jesser* ***Centre:*** *Mackay Sugar's Eimco B-B DH 36* FARLEIGH *(L254 of 1990) stands outside the loco shed at Marian Mill on 18 September 2009. Behind is BVAN2, one of a set of paired Gemco brake wagon units. Photo: Hayden Quabba* ***Above:*** *Com-Eng 0-6-0DH* TULLY-17 *(AH52100 of 1966) is fitted with a demountable ballast plough and here sits awaiting further maintenance duties with an interesting selection of navvy vehicles, 15 November 2009. Photo: Luke Horniblow*

made it run very rough and which proved difficult to remedy. As there was no shortage of locomotives at the mill, it was easier to set it aside, a sad fate for one of the more modern Com-Eng locomotives. Scott Jesser 12/09; Neill Farmer 12/09

TULLY SUGAR LTD

(see LR 210
610mm gauge

In mid-November, the directors of Tully Sugar unanimously recommended that the shareholders should reject a takeover offer from Maryborough Sugar Factory. Industry sources suggested that Maryborough might strengthen its share offer with cash.

The rebuilding project for Walkers B-B DH 618 of 1969 is progressing, with the refurbished and repainted chassis noted outside the workshop on 22 November. Once the new bogie locomotive is completed it is anticipated that Com-Eng 0-6-0DH *TULLY-17* (AH52100 of 1966) will be spare and allocated to navvy duties. Com-Eng 0-6-0DH locomotives *TULLY-12* (AD1351 of 1961) and *TULLY-15* (AK3574 of 1964) were fitted with new Cummins engines at the end of the crushing season. Both bogie brake wagons were also fitted with new air compressors. Walkers B-B DH locomotives *TULLY-5* (650 of 1969 rebuilt Walkers 1993) and *TULLY-7* (657 of 1970 rebuilt Tulk Goninan 1994) are expected to be repainted before the start of the 2010 season.

A proposal has been put forward to construct a 7km extension south from the Upper Murray area to Bilyana. The starting point would be Hamlin Road, on the Upper Murray Road extension tramway just south of Upper Murray Road. Construction would commence at the end of the current wet season and would take 18 to 24 months to complete. A large part of the proposed alignment is on a Powerlink reserve and a road reserve, but stringent environmental controls have to be met. The project will require assessment and approval by the Commonwealth Government under the Environment Protection and Biodiversity Conservation Act 1999. The proposal includes 'cassowary friendly crossings', and three rope bridges for the use of mahogany gliders. Currently, much cane from the Bilyana area is trucked 85km to South Johnstone Mill and cane growing in the area to the south is increasing.

Australian Food News 13/11/09; *North Queensland Register* 25/11/09; Luke Horniblow 12/09;
http://tinyurl.com/Bilyana-tramline
http://tinyurl.com/Bilyana-assessment

SOUTH AUSTRALIA

BHP BILLITON, Olympic Dam

(see LR 210 p.28)
914mm gauge

A 105 kilometre standard gauge railway line may be built between the mine and Pimba, on the transcontinental railway. The line will assist with the programmed expansion of the mine as well as allowing concentrate to be railed to Darwin. Obtaining government approvals for the project could be expected to take as long as two years. *Roxby Downs Sun* 9/12/2009

Industrial Railway NEWS

VICTORIA

MORNING STAR GOLD NL, Woods Point
610mm gauge
Work has been proceeding for some years to rehabilitate and redevelop the Morning Star mine which was worked by Gold Mines of Kalgoorlie (Australia) Ltd, later to be known as Western Mining Corporation, from 1934 to 1959. Over 330 metres of rail track have been installed at 9 Level, with a bogger, possibly an Atlas Copco, in use. Some track has also been reinstated at 4 Level. Photographs show that track has yet to be installed on the surface. Skips are manhandled on a concrete apron at the top of the shaft and tipped by a hoist. It is hoped that gold production may commence in 2010.
www.morningstargold.com.au via Phil Rickard 12/09

WESTERN AUSTRALIA

Proposed BHP Billiton-Rio joint venture
A $116 billion iron ore joint venture agreement was signed in early December by BHP Billiton and Rio Tinto to combine their Western Australian iron ore operations. It is hoped to complete the deal in the second half of 2010 with each company holding a 50% stake in the combined Western Australian iron ore assets. This is expected to result in a payment of around $6 billion by BHP to Rio Tinto, which has the larger iron ore production. The companies expect to save at least $10 billion a year in capital and operational costs by merging their operations. Some predict that regulatory approvals will be hard to obtain. Because both miners are dual stock market listed, in both Australia and Britain, approval is required from both the European Commission and the Australian Competition and Consumer Commission. It is hoped that the continuation of separate ore marketing will placate the regulators.
Yahoo! News 5/12/09

BHP BILLITON IRON ORE PTY LTD
(see LR 210 p.28)
1435mm gauge
All the remaining General Motors EMD Model SD-40 Co-Co DE locomotives were withdrawn from iron ore service by the start of November. Just four, 3078 (31503 of 1966), 3079 (31542 of 1966), 3080 (33674 of 1968) and 3090 (33680 of 1968) remain available for use on work trains and yard shunting duties while the latest batch to be withdrawn are stored in various parts of the Nelson Point complex. These locomotives were imported in 2003-4 for short-term use pending the delivery of new units from Canada.
A total of 201 old Goldsworthy Mining 70-ton ore cars built by Tomlinson Steel in Welshpool and Scotts of Ipswich in the mid-1960's have been sold to CFCLA. They were hauled by road to Perth and then consigned to Adelaide on flat wagons with the bogies travelling in gondola cars during November and December.
West Australian Railscene e-mag 53, 56 & 58

LOCOMOTIVE, ROLLING STOCK AND EQUIPMENT MANUFACTURERS

LOADQUIP PTY LTD, Brisbane
This company, the manufacturing arm of CMP Engineers, recently contracted N+P Site Boring Pty Ltd to carry out the rebuilding of an EM Baldwin bogie cane locomotive for Victoria Mill (see LR 208 p.22). The company advises that it is also able to rebuild 40-tonne locomotives with a Caterpillar C18 engine as well as build new bogie locomotives.
http://www.loadquip.com.au/index.php?ref=MTY4Nw via Carl Millington 11/09

Top: *Mossman Mill's Com-Eng 0-6-0DH twins* DOUGLAS *(AL2562 of 1963) and* FAUGH A BALLOUGH *(AL4190 of 1965) haul a varied collection of bogie bins across the golf links level crossing on 16 September 2009. Photo Carl Millington* ***Above:*** *2ft gauge track at the Department of Works Materials Testing Laboratory at Lae, Papua New Guinea. Photo: Bob McKillop*

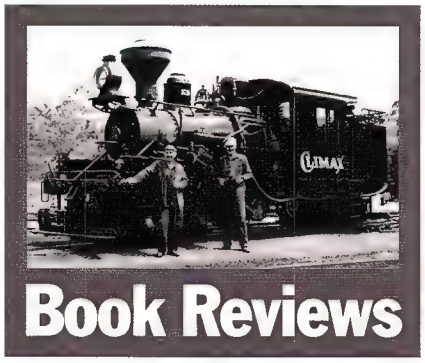
THE PILBARA INFRASTRUCTURE PTY LTD
(see LR 209 p.23)
1435mm gauge
Fortescue Minerals Group announced on 2 November that NRW Holdings Ltd has been authorised to recommence construction of the Cloudbreak line extension to Christmas Creek. Work had been suspended on 26 November 2008 with $45 million of work still to be completed. It is anticipated ithat the line will be completed in December 2010.
West Australian Railscene e-mag 53

FIJI

FIJI SUGAR CORPORATION
(see LR 210
610mm gauge
A visit in November revealed that there are three Clyde 0-6-0DH locomotives based at Navo depot, south of Nadi on the Lautoka system, a Model HG-3R, 9 (64-380 of 1964), and two Model DHI-71, 20 (64-385 of 1964) and 21 (58-191 of 1958). Clyde 0-6-0DH *Howie* (59-202 of 1959 rebuilt Ontrak 2434-1 of 2008) was noted hauling 100 empties north from Lautoka to Navau loop. The driver said it was a 'strong engine' and it is quiet, but he was not impressed by the perspex windows, which are crazing, nor by the lack of a dipped position for the lights, nor the lack of extra windscreen wipers, nor the position of the (very loud) horn right above his head on the cab! Because of the frequency of breakdowns at Rarawai Mill, and the very late start to the season, the Ba rail system was expected to be hauling cane until mid-January 2010.
It was reported in December that a portion of track at Sanasana Village, near the new Inter-Continental Golf Resort and Spa at Natadola, had been fenced off by villagers. The land was said to belong to the village and it was stated that the lease with Fiji Sugar Corporation had expired. A spokesperson for the Native Land Trust Board said that negotiations between the villagers and FSC were still in progress. This is interesting as the section of track in question is south of Batiri Point, which had been designated earlier in the year as the limit of cane rail transportation.
Meanwhile, the use of the FSC rail system for the cost-effective transport of freight in containers, financed by large cargo carriers, was suggested by a local economist at a conference in December.
Ian Dunn 11/09; *Fiji Sun* 3/12/09 & 6/12/09 via Brad Peadon

PAPUA NEW GUINEA

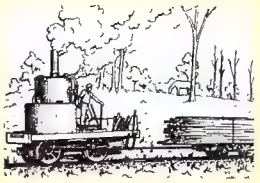
DEPARTMENT OF WORKS, Lae
610mm gauge
A previously unrecorded, and now disused, light railway has been found at the Materials Testing Laboratory at the Department of Works compound in Lae and was obviously used to transport materials such as rock for road construction from motor vehicles to the machines used for testing. The laboratory building, a typical 1960s building, is some 60 metres in length, running nearly north-south and the tramline runs the full length of the building. Approx 45m from the northern entrance there is a turntable giving access to an east-west line, which goes through a large loading door on the western side. This track is currently 11m in length, but was probably longer originally. The site is still used for materials testing but part of the building has been partitioned for offices.
Bob McKillop 12/09



The Burning Mists of Time
A Technological and Social History of Mining at Katoomba
By Philip J. Pells and Philip J. Hammon

A4 size, hard cover with colour cover, 258 pages. 50 Colour and 45 black and white photographs, 19 diagrams and 29 maps. Published 2009 by WriteLight Pty Ltd for Philshare Publishing. Price $60.00 plus $7.50 postage from ARHSnsw Sales, 67 Renwick Street, REDFERN NSW 2016

The Burning Mists of Time brings together various levels of information about the story of the establishment of Katoomba and the Scenic World, located in the Blue Mountains in New South Wales. It traces the mining of oil shale and coal; this infrastructure forming a basis of today's tourist attraction. The authors state that an objective in bringing together this history is to correct previous histories of oil shale discovery and the local history of Katoomba's mining activities.
The text covers the geological history of the area, an explanation of oil shale, its use and the saga of its discovery. It then moves onto land acquisitions and how oil shale rose to prominence, with 681,000 litres of oil produced in 1874 by the American Creek works. In a subsequent phase, over 120,000 tons of oil shale was mined in the 1940s.
A feature of the story is the famous incline railway, which subsequently became a major tourist attraction providing access to the Jamison Valley for thousands of visitors who wish to experience the now World Heritage listed Blue Mountains National Park. There is a fascinating description of how nature reclaimed "the desolate mess" which is now part of the National Park.
The book contains maps, photographs and data sheets of events and people associated with the technology and history at Katoomba. It is well researched, clearly written and easy to read. One of the authors has a technological background while the second has a lifetime connection with the scenic railway. *Hugh Markwick*



LRRSA NEWS

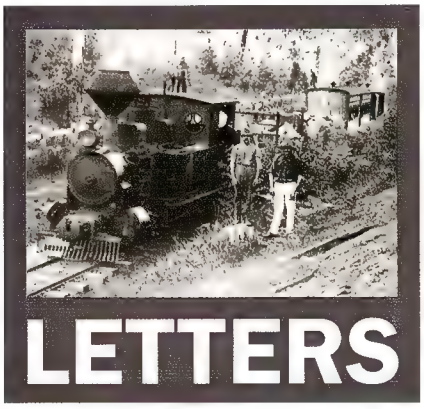
MEETINGS

ADELAIDE: "The Otway Ranges, Autumn 1959"
Photos taken during a day spent in the Otway Ranges in Autumn 1959 will be presented, and members are also invited to make contributions on any topic of light railway interest.
Location: 150 First Avenue, Royston Park.
Date: Thursday 4 February at 8.00pm.
Contact Arnold Lockyer on (08) 8296 9488.

BRISBANE: "Moreton Mill Movies"
To start the New Year Bob Gough will show movies taken around the Nambour area, which have recently been converted to DVD format.
Location: BCC Library, Garden City Shopping Centre, Mount Gravatt.
After hours entrance (rear of library) opposite Mega Theatre complex, next to Toys'R'Us.
Date: Friday 12 February at 7.30pm. Entry from 7pm.

MELBOURNE: "Light and Industrial Railways"
Weston Langford will give a presentation depicting light and industrial railways and relics with examples from all Australian States.
Location: Ashburton Uniting Church Hall, Ashburn Grove, Ashburton.
Date: Thursday, 11 February at 8.00pm

SYDNEY: "New Zealand Bush Tramways + Narrow Gauge on U-Tube."
Mic Thomas will first be presenting a video on New Zealand Bush Tramways, then he will follow by showing a varied and sometimes fascinating selection of narrow gauge railway video clips taken off U-Tube.
Location: Woodstock Community Centre, Church Street, Burwood, (five minutes walk from Burwood railway station).
Date: Wednesday 24 February at 7.30pm



Dear Sir,

Glenrock Railway
(LR 200, 201, 208, 209, 210)

Further to your excellent coverage of the Glenrock Mine Railway, please find slides taken in late 1960 of what then remained of the line and trucks.

I was a member of 2nd Newcastle Scout Troop and walked along the track and sometimes through the tunnels.

The shots were taken at a point not far from the sewerage outlet at the end of Murdering Gully.

I remember the train passing through or crossing Parkway Avenue, Tooke Street and Darby Street, on the way to Hunter Street. That was in the early 1940s.

Tony Short
Newstead, Tas

Dear Sir,

'Dewatering truck' (LR 210)

Re the query on Page 33 of LR No 210: This appears to be a very small 'bailing tank'.

These were quite common in metal mines throughout Australia in the 19th century, less so (although not unknown) in coal mines.

They were used in sinking operations before the permanent pumps were installed in small mines with limited resources, for emergencies following an inrush, or for dewatering inacessible drives .

Where the access (ie shaft) was vertical, baling cages were used, at times shackled below the ore cage, usually replacing it.

Commonly ore was hoisted during the day and water (from a sump) on night shift.

Small tanks (as in the photo) were filled by hand; larger versions were submerged in the water, being specially weighted so as not to float off the rails !

I have even heard of an installation where a vacuum ejector (run off the compressed air main) sucked water into the tank.

John Shoebridge
Dora Creek, NSW

Dear Sir

Steam Locomotives on Victorian timber tramways - part 2 (LR 210)

A small correction is needed to Part 2 of Frank Stamford's most interesting article. On page 23 he shows the Goodwood Timber & Tramway Co.'s O&K 3771 of 1909 as being a 0-4-0WT, whereas it has now (post publication date) been positively identified as a 0-6-0WT. Furthermore, using the LR convention, the name should have been shown as *LILY* (not *Lily*), as it was actually carried on the locomotive.

Although obvious to most readers, it should be formally noted that in the first part of his article (LR208, page 3) Climax locomotive No.1694, is incorrectly shown as No. 1649.

Richard Horne
South Croydon, Surrey, UK

Twenty years after Glenrock Colliery closed, a dumb-buffered coal hopper returns to the elements on the mine siding. The faint lettering indicates that at one time, it was part of JP Kennaway's fleet. Long after such vehicles had been banned from main-line working, Thomas Howley had several on hire to convey house coal between his mine and The Junction. ❐ *The rail line along the exposed cliff face, north of Glenrock Lagoon, was always difficult to maintain. This photograph, looking south, was taken some 40 years after the line closed, the tattered remnants providing clear evidence of the reason for its abandonment.* ❐ *Their woodwork having long-since rotted to oblivion, only rusting wheelsets remain from coal wagons abandoned at the southern extremity of the Glenrock Colliery sidings. Photos: Tony Short*

New from LRRSA Sales ...

Tall Timber & Tramlines Queensland

By John Kerr

Published by the LRRSA.

Describes all Queensland timber tramways known to the author.

Soft cover, 104 pages, A4 size

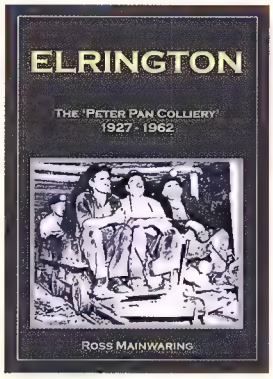
90 photographs, 28 maps and diagrams,

References, bibliography, and index.

Price $29.95 plus postage
($22.46 to LRRSA members)
Weight: 520 gm

Elrington

The 'Peter Pan Colliery' 1927 – 1962



By Ross Mainwaring

Published by the LRRSA.

A coalmine and its railways near Cessnock NSW, established by the BHP in 1927.

Soft cover, 96 pages, A4 size

64 photographs, 9 maps and diagrams,

References, bibliography, and index.

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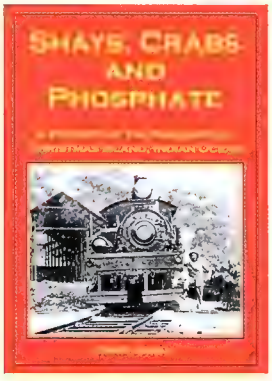
Shays, Crabs and Phosphate

A History of the Railways of Christmas Island, Indian Ocean



By David Jehan

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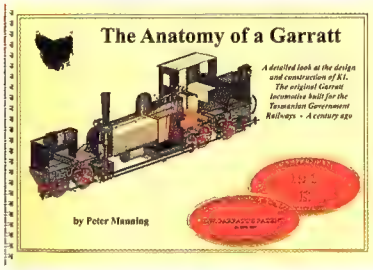
The Anatomy of a Garratt

A detailed look at the design and construction of K1. The original Garratt locomotive

Published by Peter Manning Design & Drafting



64 pages, A4 size landscape, card cover spiral bound, about 350 illustrations.

Price $39.95 plus postage
($35.96 to LRRSA members)
Weight 320 gm

Postage and packing: Within Australia, 501 gm to 3 kg $10.90, over 3 kg $14.00
Send to: LRRSA Sales, P.O. Box 21, Surrey Hills Vic 3127, Fax (03) 5968 2484.
Payment may be made by cheque, money order, Mastercard or Visa.

Buy securely on line,
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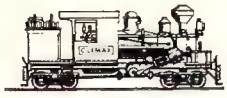

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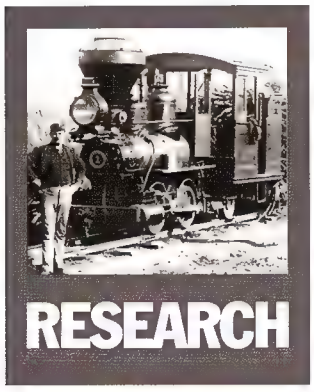

Target trolleys, VIC

We previously ran an item on the restored target trolley on display at the Royal Australian Army Corps Tank Museum at Puckapunyal in LR 198 (pp. 27 and 30). For those readers who actively follow the LRRSA Yahoo group postings, there have been a number of interesting items posted regarding the manufacture and use of target trolleys at military ranges and the like. Evidently a target trolley used at the Williamstown rifle range was manufactured at the Victorian Railways (VR) workshops, as was the control panel for the East Sale target tramway.

Roderick Smith posted the details of an article in the *VR Newsletter* of February 1957 regarding a 2ft gauge target trolley manufactured in the VR workshops for the 1956 Olympic Games in Melbourne. It states:

The Department supplied not only a large number of officials for various events at the Olympic Games but also constructed the bogie and carrier frames for the Olympic running deer shoot. Assembly working drawing was supplied by Southern Command, from which Newport Workshops' Drawing Office prepared detailed blueprints. Bogie and carrier frames were built in the Steel Construction Shop, and the trolley wheels were moulded in the Foundry from a pattern of those on the trollies used on the Welshpool jetty. Machining of wheels and axles was done in the Machine Shop, and marking-off and assembly of the unit by Plant Division staff. Track and sandbag emplacements were supplied to a Southern Command drawing.

Evidently at the conclusion of the Games, the installation was sold to Victorian Running Deer Association (a subsidiary of the Victorian Sporting Shooters Association) for relocation. Further research on the design, manufacture and operation of target trolleys in Victoria offers an interesting field for LRRSA members.

NLA Australian Newspapers Digitisation Program (ANDP)

The Australian Newspapers beta service was released to the public by the National Library of Australia in October 2008 with 5.5 million historic newspaper articles then available on line. More articles are added every week and there were to be 40 million available by the end of 2010. Recent additions to the ANDP of interest to LRRSA researchers include:

- *Sydney Morning Herald:* The first 20 years of this program (18,000 pages), being implemented through a grant from the Vincent Fairfax Family Foundation, has became available on line in November 2009. This covers the *Sydney Herald*, 1831-1842 and the *Sydney Morning Herald*, 1842-1851. Additional issues covering the period from 1851 to 1954 are being made available each week.
- *The Argus*, Melbourne: The complete set of issues from 1846 to 1945 is now available in line. The remaining 10 years (1945-1954) will be made available in the second half of 2010.

In a recent posting on the NLA website (Gateways 101, October 2009), the ANDP manager, Rose Holley, highlighted the use made of the site by LRRSA researchers. Following a summary of the Society's research objectives, Ms Holley quoted Frank Stamford as follows:

For over forty years, old newspaper files have played a very important part in the historical research done by members of this Society, and having the newspapers online has made our task much easier and more productive.

She explained that the service has generated a great deal of interest, discussion and enthusiasm among LRRSA members. "For example, researchers John Browning and Phil Rickard have been looking for information on sugar cane mills and tramways in Queensland, and early tramways and tram roads in the Northern Territory and Tasmania. Using ANDP, they have found references to previously unknown tramways. They have also located newspaper articles about the early use of timber tramways in Queensland around the 1860s and information about industrial railways in Tasmania that were operating almost 40 years before the first steam public railway opened in the state in 1871. As Rickard says:

The Australian Newspapers online enables any member who may be living far (or near) from a capital city library, to do a bit of research from home and share the results with all members. For us, the ANDP is reversing the tyranny of distance.

Two Australian Army officers push the rail-mounted target trolley along the butts of the Williamstown Rifle Range during the 1956 Olympic Games deer shoot. Photo: Bruce Howard, National Library of Australia

LRRSA Post-fire heritage survey, VIC (LR 208)

The work of the LRRSA volunteers in locating, inspecting, photographing and documenting historic sites following the February 2009 Victorian bushfires received acknowledgement in an article in *The Age* on 5 December titled 'Fire again claims mountain gem'. This article focused on the loss of the loss of the Beech Creek Bridge in the Rubicon Forest, which is located outside the scope of the LRRSA survey groups.

Most of the work done so far by LRRSA volunteers has been limited to three locations: (i) the Mount Disappointment State Forest, where the mills and tramways of the Australian Seasoned Timber Company and some of the later mills are being mapped in great detail; (ii) the Black Range west of the Acheron Valley, where hitherto unknown tramways are turning up along with many relics of winches, mill engines and tramways; and (iii) Kinglake, where a one-man team has been mapping and describing, some early sawmills—even some sites we were unaware of before the fires. Some field work has also been done near Marysville and east of Powelltown. The team is concentrating on gaps in existing knowledge rather than well-known sites. The results include detailed plans of mill buildings, housing distribution at mill sites, the location and type of tramway bridges, descriptions of tramway construction methods, the remains of a mill boiler explosion, and even the site of a noteworthy locomotive derailment.

It is estimated that the teams have another 12 months before the rampant regrowth makes the work unproductive. At the conclusion of the survey all of the data will be reported to Heritage Victoria, the Department of Sustainability, Environment (DSE) and Parks Victoria. This will form a permanent record of the work and will either result in the addition of new sites to heritage registers or the reinforcement of existing registrations, helping to protect such sites from future disturbance. A more immediate result will be the incorporation of the mapping data in LRRSA publications.

Peter Evans

LRRSA Thompson and Tyers Tour, VIC (LR 79)

Your humble narrator breathed a sigh of relief when the cool change came through around 4pm on Friday

20 November 2009, ending a week of very hot weather in Melbourne. It meant that much milder weather conditions for the 21 LRRSA members and friends who undertook the Thomson and Tyers tour over the next two days.

The participants travelled 160 km east of Melbourne to meet at the Erica Reserve at 9am on the Saturday where Scott Gould, the tour leader, provided everyone with detailed notes. The reserve hosts very impressive picnic facilities and has the ex-Forest Commission Days McCormack-Deering rail tractor used on the Thomson Valley Tramway until 1950, together with two log bogies with log in-situ, as a static display. Scott also brought along a number of contemporary photographs and research articles which enhanced our on-the-ground experience.

The plan was to investigate the remains of the 3ft gauge Thomson Valley tramway from Little Boys Camp, some 35km north of Erica back towards Ezard's No.1 mill site and South Face Road (formerly Finn's Track). The group drove to South Face Road and walked into Little Boys camp. Several collapsed huts were found in the camp clearing, along with water tanks and even outdoor furniture.

Close to the camp the remains of the first small bridge over a tributary of Little Boys Creek was located. The area was fairly overgrown and had been disturbed by bulldozers from later logging. Conditions were quite humid as the group worked its way through substantial undergrowth to follow the tramway alignment and not the dozer tracks in search of the trestle bridge across Little Boys Creek. Finally, after several false leads, the bridge abutment and the impressive remains of the collapsed trestle lying across the creek were located. Standing on the abutment and visualising the trestle sweeping across the creek gully, the participants couldn't help but be impressed by the height above the ground that the centre span would have had.

Next the group visited Rocky Knob and the remains of the South Cascade Creek trestle which is clearly visible from the road. Unfortunately the Forestry Commission blew up the trestle in 1967 as it was too easily accessible with the abutments at road level and very unsafe by that time. Moving onto Ezard's No.1 mill site, formerly O'Shea and Bennett's No.2 mill, the mill site was inspected revealing numerous relics scattered over a wide area, including the saw trenches as well as the sawdust heap further down the hill.

Next stop was the southern abutment of the Narrows trestle, from where the tour walked the alignment back to the cars on South Face Road. This area has had seen substantial damage from the recent Black Saturday fires. Unfortunately a number of small trestles had been burnt, but there was no difficulty following the alignment.

The group then headed back to Rawson, where most people were staying overnight, for a hot shower and cold beer, but not necessarily in that order. After dinner, Scott arranged a presentation of the post bushfire research work the LRRSA had undertaken since the Black Saturday bushfires, focusing on the findings at the Black Range (Narbethong), Mount Disappointment (Wandong), Bunyip and Steels Creek. Following the presentation, rain set in and it continued virtually non-stop until 7am the next day.

Miraculously the rain had stopped by breakfast and the tour group reconvened back at the Erica Reserve at 9am before walking 11km along the alignment of the Forest Commission 2ft 6in gauge Tyers Valley tramway from Collins Siding to Tyers Junction. This section is historically significant as it was where the Climax locomotive now at the Puffing Billy Railway had operated in timber haulage duties. The plan was to walk to Tyers Junction for lunch then possibly head back to Morgan's tramway near Walhalla, but this was not to be.

The tour travelled along the alignment inspecting several embankments and abutments where the remains of small trestles could be seen. About halfway to Tyers Junction the heavens opened up and it rained quite heavily. The temperature dropped noticeably and the wind increased as the storm front moved in. The participants were thoroughly soaked by the time they reached their vehicles at Tyers Junction around 1pm.

The group decided to fall back to the picnic shelters at the Erica reserve for lunch where they could get out of the rain and change into dry clothes. The rain had obviously set in for the day, so plans to visit Walhalla after lunch were abandoned. Everyone was in fine spirits once they donned dry clothes and had a well earned lunch.

The picnic shelter offered another chance to review the maps and additional information that Scott brought along for the tour. Looking back over the weekend, it was realised that the tour participants had been privileged to see some of the trestle bridge remains, which were now in an advanced state of decay and unlikely to last much longer.

Once again Scott Gould, with assistance from Stuart Thyer, had researched, planned and executed a sensational tour to Thompson and Tyers, which were two of the last forest tramways operating in Victoria. Special thanks are extended to Scott who freely shared his historical knowledge with the participants of this tour.

For more information on both these tramways, Light Railways *No. 79, a special edition which focuses on tramways of the Erica district, written by Mike McCarthy, is available as a PDF download from the LRRSA website.*

Simon Moorhead

The tour group inspect bridge foundations (right) near John Creek on the Tyers Valley tramway where the Climax loco operated between 1930 and 1950. Photo: Simon Moorhead

Heritage & Tourist

News items should be sent to the Editor, Bob McKillop, Facsimile (02) 9958 8687 or by mail to PO Box 674, St Ives NSW 2075.
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Digital photographs for possible inclusion in Light Railways should be sent direct to Bruce Belbin at: boxcargraphics@optusnet.com.au

NEWS

Queensland

AUSTRALIAN SUGAR CANE RAILWAY, Bundaberg
610mm gauge
Bundaberg Steam Tramway Preservation Society Inc.
The Australian Sugar Cane Railway had a busy schedule of operations over the Christmas holiday period, operating every Tuesday and Friday using diesel locomotives, while steam power operated trains on Wednesdays and Sundays. Trains also operated on Saturday 26 December (Boxing Day). They clattered over the 1km loop through the gardens twice during each 20-minute trip.
BSTPS president Wendy Driver told the *News Mail* reporter that she had been contacted by a number of people worried that the attraction would not be running this Christmas, after concerns were raised that Queensland Rail regulations could affect the service. She assured local residents that "it is going ahead as usual. We will be running extra services during the week for the school holidays, until the end of January." With fares at $3 for adults, $1 for school-aged children and a family ticket costing just $8, the ASCR offered an opportunity for families to enjoy low-cost entertainment within the Botanic Gardens.
News Mail, 17 December 2009, via John Browning

FAIRYMEAD HOUSE SUGAR INDUSTRY MUSEUM, North Bundaberg Botanical Gardens, Bundaberg Regional Council
610mm gauge
Fairymead house was built in 1890 to an Indian bungalow plan. It was originally the home of the Young family, owners of Fairymead Sugar Mill and Plantation. The Bundaberg Sugar Company donated it to the City of Bundaberg as an Australian Bicentennial gift and it was relocated to the Bundaberg Botanical Gardens. It is now a sugar industry museum, displaying photographs and artifacts illustrating the development of the sugar industry and the history of milling. A number of photographs show cane railways. In the basement level, two wooden cane trucks, numbered 134 and 135, are displayed.
John Browning 10/09

GEOFF DUNNETT, Burnett Creek
1067mm gauge
Peckett 0-4-0ST 1069 of 1905, with cylinders and motion missing, was noted stored outside a property on Burnett Creek Road, south of Boonah, on 16 December. This locomotive was recently sold from the estate of Jeff Daly in Melbourne and it is understood that Mr Dunnett also acquired Peckett 0-4-0ST 1174 of 1908 from the same source. It is suspected that this and another locomotive, Avonside 0-6-0T 2043 of 1930, are located nearby. The Peckett locomotives were built for Mt Morgan Mines and later worked at Mt Isa Mines. The Avonside was built for Pioneer Mill.
John Browning 12/09

New South Wales

ILLAWARRA TRAIN PARK, Albion Park 610mm gauge
Illawarra Light Railway Museum Society
With the resumption of public operations in 2009 following the rebuild of the main line, the ILRMS enjoyed successful running days at its Albion Park site throughout 2009. Visitor numbers were good as local families discovered the Illawarra Train Park to be a pleasant venue to visit. ILRMS volunteers manned extra running days, helping to highlight a great year. The feature events were the 'Wings over Illawarra' Day on 22 February, held in conjunction with the Historic Aircraft Restoration Society (HARS, see LR 206, pp. 27-28), the Mothers' Day run with the Shellharbour Kids Fest and the ILRMS 30th Anniversary celebrations on 12 July (LR 209, p.32). The ILRMS rounded the year off with its first ever Halloween run. The steam locomotive *CAIRNS* (Hudswell Clarke 1706 of 1939) was in action for the Shellharbour Kids Fest and the Halloween running day. The success of these events gave a great lift to the ILRMS volunteers.
The big event to get the 2010 activities under way will be the HARS 'Wings over Illawarra' event on Sunday 28 February. The ILRMS will be running the bus-rail shuttle service to enable visitors to enjoy the railway experience in addition to the historic aircraft. Two steam locomotives will be used for the passenger transfer between Yallah station and the triangle area terminus
The steam boilers at the Albion Park site were stripped down for their annual inspection during August, with the checks on four locomotives and the vertical stationary boiler being completed within the month. All operational diesel locomotives were used during the 2009 open days.
Brad Johns and Robert Marczan, 12/09

RICHMOND MAIN HERITAGE PARK, Kurri Kurri
1435mm gauge
Richmond Vale Preservation Cooperative Society Ltd
The RVR Family Fun Fest was held on 19-20 September with a good attendance. Train services comprised ex-SMR 2-8-2T 30 (Beyer Peacock 6294 of 1924) and ex-BHP steelworks Bo-Bo DE 34 (A Goninan 3 of 1954) sharing the haulage of passenger trains from Richmond Main to Pelaw Main and return with a 40 minute timetable, while 0-4-0ST *MARJORIE* (Clyde Eng 462 of 1938) was kept on light duties with the Mulbring Road shuttle trains. Since its return to service with new bearings, *MARJORIE* has been carefully monitored for any hot bearings as the driver's side main bearing axle journal had been damaged at some time by overheating.
Following the transfer of ex-SMR 2-8-2T 19 to the RVR (LR 208, p.29), its chimney was removed and used to replace the broken chimney on ex-SMR 30. The heavy overhaul of the ex-Maritime Services Board (Coffs Harbour) 4wDM Planet locomotive (Hibberd 3715 of 1955) involved a rebuild of the Dorman

The former Lysaghts Port Kembla 0-4-0T ALISON *(Barclay 1738 of 1923) at the Richmond Vale Railway following its delivery from the NSW RTM at Thirlmere on 9 November 2009.* *Photo: Wendy Black*

engine and extensive repairs to the radiator. During a trial run of the engine, a 'miss' was noted and it was observed that the injectors and injector pump required a thorough service. Work continues on re-painting ex-BHP centre-cab Bo-Bo 53 (A Goninan 018 of 1964). The locomotive has been inactive for over two years and, as a result, one of the traction motors is inoperable due to moisture damage and will require replacement.

The former Lysaghts Port Kembla 0-4-0T *ALISON* (A Barclay 1738 of 1923), which has been in open storage at the NSW Rail Transport Museum since 1972, has been placed on long-term loan to the Richmond Vale Preservation Cooperative Society. It arrived at the Richmond Main site by road on 9 November 2009 and was placed on a short section of track.

Graham Black, 12/09; *Link Line* 152, Spring 2009

STATE MINE HERITAGE PARK & RAILWAY, Lithgow

660/1435mm gauges

City of Greater Lithgow Mining Museum Inc.

Lithgow State Mine Railway Limited

Work has commenced on surveying new property boundaries within the former State Coal Mine site to facilitate transfer of the mine's rail corridor, including former arrival and departure roads, to Lithgow State Mine Railway Ltd. This will assist in ensuring a clear separation of statutory responsibilities for management of the railway.

The stalled project to restore the former Eskbank locomotive depot as the operating base for the Lithgow State Mine Railway received a boost on 9 October 2009 when a 60-foot Sellers cast iron turntable identical to the one originally installed there in 1882 was placed in the excavated pit. This turntable came from Wollongong Yard, currently under redevelopment, and had been donated to the State Mine Railway by RailCorp following extensive negotiations for a suitable turntable. Volunteers have commenced work on ex-NSWGR and Portland cement works 2-6-2T 2605 (Dübs 2794 of 1891). The water tank, boiler and motion have been subjected to detailed inspection, and repairs carried out on the Webb radial axle.

The State Mine Museum is hosting a travelling exhibition between December 2009 and April 2010 of the 1909 Broken Hill Lockout. It was developed to commemorate the centenary of this momentous event in Australian industrial relations history. Story boards relate the background to the conflict and the roles of the companies, the unions, pickets, 'scabs' and the women of Broken Hill. Various original documents relating to the lockout are also on display.

The museum's latest publication *Tyldesley the village that disappeared* (see LR 210, p.32), was launched at the Royal Hotel, Cullen Bullen on Wednesday 9 December 2009 by Lithgow Mayor Neville Castle. Entertainment at the launch was provided by Martin Doherty and Leigh Burkett of the local folk group Roisin. The pair performed a number of coalmining songs, including Martin's new tune titled 'State Mine Horse'. This song tells the story of 'Duke', a horse regarded by many as "the greatest little horse ever to go down a mine".

Ray Christison, 12/09

0-6-0DH SHELLHARBOUR *(John Fowler 21912 of 1937; rebuilt EM Baldwin 1963) heads a train around the loop at the Albion Park Train Park during 2009.* *Photo: Robert Marczan*

Fowler 0-4-0WT WEE GEORGIE WOOD *(16203 of 1924) in action on his namesake railway at Tullah, on Tasmania's west coast, during the first running day of the new year, Sunday 3 January 2010.* *Photo: Greg Blake*

TIMBERTOWN, Wauchope

610mm gauge

Port Macquarie-Hastings Council

Updating the report in LR 209 (p. 29), the local council adopted the recommendation to sell Timbertown to potential buyers David and Alison Waite, who were identified through an expression of interest process, on 25 November 2009. Mr Payne, the Council Administrator supported the sale saying it not only meets the community's expectations for the park, but also aligns with Council's agenda of concentrating resources on core services. He added: "While the sale will be made on a commercial basis which does not give Council the right to place conditions on the park's use, the operating model presented by the Waite's gives me confidence that the buyers aim is to continue to operate as a heritage theme park. This is the outcome that was overwhelmingly expressed in the community consultation process."

The sale of Timbertown was identified as the most viable option when

Council prepared six proposed operating models for a report to Council at its meeting on 26 August. The media release states that once the sale is complete, the new owners intend to meet with commercial tenants and community groups to ascertain future arrangements. At this stage there is no indication of the future of the Timbertown Heritage Steam Railway. It was closed in June 2009 due to accreditation issues.
Port Macquarie-Hastings Council website, 26 November 2009

Tasmania

WEE GEORGE WOOD STEAM RAILWAY, Tullah 610mm gauge
Wee George Wood Steam Railway Inc.
We last reported on the Wee Georgie Wood Steam Railway Inc. in LR 205 (pp. 29-31) when it was facing major challenges and struggling to remain in operation. It is therefore pleasing to note that this 'little railway' opened its 2009-2010 operating season on a much more optimistic note. In short, a new and vibrant committee has brought the group back from the brink and injected a new air of enthusiasm into the small organisation. An expanded membership base has brought fresh new ideas and skills which will stand in good stead for the future.
A key challenge was the shortage of accredited drivers and crew members due to key volunteers moving away from the area, so the struggling railway required assistance from other railway operators to maintain operations during the 2008-09 season. From February 2009 a driver training exercise started spawned five new drivers from the ranks of new members to help the organisation fulfil a long needed resource to keep *WEE GEORGIE WOOD* on the track. The new drivers had been coached along diligently by Graham Hawes who has been tirelessly overseeing their training. They graduated in mid-July to become fully accredited drivers and guards.
During the off season, working bees concentrated on up-grading track work and collecting fire wood with assistance from the community of Tullah. Wee Georgie Wood Steam Railway Inc. was successful in gaining a modest community grant for the purchase of much need tools and safety equipment, while the West Coast Council provided assistance to repair and maintain buildings on the site. This work will be completed in the New Year. In December 2009 a group from the community, assisted by the Tullah Progress Association, organised the annual Christmas Carol night at the Wee Georgie Wood site that raised funds for the coming season. Repairs have been carried out on the carriage and the running gear was overhauled, while the construction of a new carriage has been a major project. It is hoped to see this carriage completed and running in 2010.
The group's key longer term challenge is to raise the substantial funds required for a new boiler for the star attraction, the diminutive 0-4-0WT *WEE GEORGIE WOOD* (J Fowler 16203 of 1924). The hard working committee has developed a business plan which will provide the strategic direction and milestones that need to be achieved if this heritage icon is to continue giving enjoyment to future generations. For the present, the loco continues to give reliable service and the remainder of the 2009-2010 operating season will see 16 running days between 3 January and 30 May 2010.

Greg Blake, 12/09

MT LYELL ABT RAILWAY
1067mm gauge
Mt Lyell Abt Railway Society Inc.
The Society ran a July winter special steam train over the Mt Lyell Railway in partnership with the West Coast Wilderness Railway. The train was an outstanding success with the train fully booked by 111 people from all parts of Tasmania taking advantage of near perfect weather and special photo stops at Rinadeena, Dubbil Barril and the Quarter Mile Bridge for members of the Wynyard and Hobart camera clubs. An additional special train was run in August for the 66 passengers who missed out on the July run. Special Mt Lyell Picnic trains from Queenstown to Regatta Point and return are planned for Australia Day, 26 January 2010, with departures from Queenstown at 07:00 and 07:45.
The small museum operated by the Society at Queenstown station has

Peter Ralph was on hand to photograph Abt 0-4-2T 5 (North British 24418 of 1938) being turned at the West Coast Wilderness Railway's Queenstown station on 2 December 2009 following its return to service after overhaul.

The displays at the Mt Lyell Abt Railway Society's museum in Queenstown railway station on Tasmania's West Coast. Featured in the centre are a 610mm gauge hand-operated fettlers' 'trike' and the 1067mm gauge fettlers' trolley behind was recovered the banks of the King River and restored by Society volunteers. Photo: Peter Ralph

drawn a steady stream of visitors comprising train travellers and general tourists to the town. It explores the significant role the railway played in developing the West Coast, when the line was primarily used to convey ore concentrates from the Mt Lyell mine to the seaport at Strahan. The displays have gradually been expanded and improved since the museum opened in April 2007 (LR 195, pp. 28 and 30). Apart from a wealth of heritage memorabilia and photographs, dating back to when the railway was under the operation of the Mt Lyell Mining & Railway Company, it features two audio-visual monitors showing interesting heritage footage of the rolling stock used at various locations along the line.

During 2009 a mining photo collection display was also set up at Lynchford station and subsequently, a display of black and white photographs telling the story of Regatta Point railway yard and its workings was established in two display cabinets at the station there. Society members also maintain the gardens and the WCWR stations and workshops.

Ruth Forrest MLC has become the Patron of the Society, replacing Dick Adams MHR, who had held the position since the formation of the Society in 1994.

Peter Ralph, 12/09; MLARC Newsletter, December 2009

WEST COAST WILDERNESS RAILWAY 1067mm gauge

Tests with Abt 0-4-2T No. 5 (North British 24418 of 1938) using bunker oil for firing have proved very successful. The Abt Corporation has purchased ex-TGR TU tanker wagons 14 and 15, formerly used for clay traffic between Tonganah and the ATM paper mill at South Burnie, to store recycled oil that will be used to run the three Abt locomotives.

In late 2009 Abt locomotives 3 and 5 were in service, with No. 1 undergoing rebuilding at the Queenstown workshops. 0-6-0 DM D1 and D2 were working the Regatta Point to Dubbil Barril passenger trains and handling the transport of Huon pine logs and bee hives from the Teepookana Forest, while V 9 was under restoration at the workshops.

A new premier passenger carriage nearing completion at the Queenstown workshops is scheduled to enter service in early 2010. Fitted out in Tasmanian oak timber, the carriage will have reverse-cycle air-conditioning in order to provide the comforts of heating and cooling, depending on the conditions.

MLARC Newsletter, December 2009

South Australia

COBDOGLA IRRIGATION MUSEUM 610mm gauge
Cobdogla Steam Friends Inc.

Volunteers from the Cobdogla Steam Friends spent autumn cutting sleepers for the new Loveday extension before the early advent of hot weather made this task too uncomfortable. The production line consists of a trestle on which the broad gauge sleepers from Loxton Station yard are placed by the front-end loader on a roller bench, over which they pass to the docking saw. This cuts the sleepers to length, and a four-head drill, set to the required specification, drills all four dog spike holes in one operation. Finally, the 2ft gauge sleepers are rolled off the end of the bench onto pallets. This stacking of cut sleepers on the pallets is the only time they are man-handled as the production line has reduced the physical effort required considerably. Off-cuts from the saw are dumped into bins and carted away with the front-end loader, which also moves the pallets of cut sleepers to the storage area.

Restoration work on rolling stock has focused on overhauling the bogies of the passenger carriages. By November 2009, this task had been completed, with the horn plates being reinforced and new bearings fitted. The oldest carriage is around 18 years old and its bogies showed little signs of wear. Restoration work on the ex-Pleystowe sugar mill 4wDM 'Simplex' locomotive *PETER* (Motor Rail 9861 of 1953) is progressing slowly. By mid-November the cooling system had been completed, the cab was nearly ready and some of the electrical wiring had been replaced.

Denis Wasley, 11/09

Coming Events

FEBRUARY 2010

1 Kerrisdale Mountain Railway & Museum, VIC. This scenic narrow gauge railway and steam museum is open to the public from 1000-1600 Thursday to Monday and public holidays. Steam engines run in the museum each Sunday. Information, phone (03) 5797 0227 or website: www.kerrisdalemtnrailway.com.au.

6-7 Red Cliffs Historical Steam Railway, VIC. Narrow gauge train operations using Kerr Stuart steam and EM Baldwin diesel locomotives, 1100-1600 and the first weekend of following months. Enquiries: (03) 5024 1345.

7 Wee Georgie Wood Railway, Tullah, TAS. Narrow gauge steam-hauled trains from 1000-1600. Also on 20 and 27-28 February. Information: www.tullah.org/wgw/

7 Ballyhooley Steam Railway, QLD. This narrow gauge railway operates steam trains between Marina Mirage station and Port Douglas every Sunday and on selected public holidays from 1020 to 1500. Information: (07) 4099 1839.

25-26 Puffing Billy Railway, Belgrave, VIC. *A Day Out with Thomas*: Thomas the Tank Engine Returns to Emerald Town Station. Also on 13-14, 20-21 and 27-28 March. Bookings essential on (03) 9757 0700.

28 ILRMS Albion Park, NSW. 'Wings over Illawarra' event with bus-rail shuttle services linking the railway and airport events.

MARCH 2010

7 Wee Georgie Wood Railway, Tullah, TAS. Narrow gauge steam-hauled trains from 1000-1600. Also on 27-28 March. Information: www.tullah.org/wgw/

7 Cobdogla Irrigation Museum, SA. Steam train operating day with narrow gauge trains and Fowler ploughing engine in action. Phone (08) 8588 2323.

APRIL 2010

4 Wee Georgie Wood Railway, Tullah, TAS. Narrow gauge steam-hauled trains from 1000-1600. Also on 24-25 April. Information: www.tullah.org/wgw/. NOTE: Final runs for 2009-2010 season on 2 and 29-30 May.

4 Cobdogla Irrigation Museum, SA. Open Day with Humphrey pump and narrow gauge steam train operations. Phone (08) 8588 2323.

15-18 State of Steam, Adelaide, SA. Promotion of SA heritage railways in Rundle Mall with Cobdogla Bagnall loco in steam and displays by SA heritage railways and tramways.

17-18 Richmond Vale Railway, Kurri Kurri, NSW. 25th Hunter Valley Steam Fest with shuttle buses operating from Maitland railway station to the Richmond Vale Railway to enjoy the festivities. Entry $15 adults, concession $10, children (5-15) $7 – all train rides are free.

Note: Please send information on coming events to Bob McKillop – rfmckillop@bigpond.com – or the Editor, Light Railways, PO Box 674, St Ives NSW 2070. The deadline for the April issue is 25 February.

Western Australia

BENNETT BROOK RAILWAY, Whiteman Park 610mm gauge
WA Light Railway Preservation Assoc. Inc.

The annual WALPRA members' dinner at Whiteman Park Village Station on Saturday 5 December 2009 celebrated 25 years of operations on the Bennett Brook Railway. The first public passenger train on the line ran on Saturday 8 December 1984 with Peter Dowding (Premier 1988-1990) at the controls of 4wDM *MAYLAND*.

The evening commenced with drinks at Revolutions Museum providing an opportunities for dignitaries and members to inspect the displays. Participants then moved to the station for speeches by founding members and Peter Dowding, the guest of honour, before a celebratory train departure and ribbon breaking took place. When the train returned to WVJ station participants sat down to a fine meal accompanied by Don Butler and his band, including a folk song about the railway. During the evening, Peter Dowding was awarded an honorary locomotive driver's certificate and accepted the position of patron of WALRPA, while 'Certificates of Appreciation' were awarded to members for their contribution to the railway.

Activities in the workshops in the latter months of 2009 focused on maintenance work on the steam locomotives. In preparation for restoration work on ex-Marian Mill 0-6-2T No.9 (Perry Eng. 2601.51.1 of 1951), the dome was removed on 14 November to reveal a 'double beat regulator' underneath, and

then the cab sides were removed. In October it was discovered that the side tanks had been bolted on from inside, so they had to be cut from inside before the tanks could be removed. A milestone at this time was the reuniting of the boiler and frames of the ex-WA Goldmining Company 0-4-4-0T Mallet (Orenstein & Koppell 2609 of 1907). This step was induced by the need for space in the shed occupied by this restoration project in order to carry out an overhaul of 4wDM PW 27 (Gemco-Funkey 1963) and the restoration of the Mallet remains a long-term project. Maintenance work on 0-6-0DM *ROSALIE* (John Fowler 4110019 of 1950) includes thorough overhaul of the radiator, with rebuilding of the drive pulley on the crankshaft.

With two successful 'Thomas' days, increased ticket sales overall and reduced maintenance costs following rebuilding of the track, WALPA enjoyed its most successful year financially in 2009. During the Christmas school holiday period the Bennett Brook Railway was scheduled to run every day from 21 December to 29 January, with the mid-week services operating from 11am to 3pm. Train services would be cancelled on days of extreme fire danger.

BBR website News, 14 November, 8 December 2009; BBR Newsletter, December 2009

HOTHAM VALLEY TOURIST RAILWAY 1067mm gauge
Hotham Valley Tourist Railway (WA) Inc.

Some two-and-a-half years of effort and expense by the HVTA and its volunteers rebuilding the line between Pinjarra and Dwellingup following disastrous bush fires in 2006 was rewarded on Sunday 20 September 2009 when Steam Ranger services recommenced. The HVTR 'light rail' services on the Dwellingup Forest Railway, namely the Etmilyn Forest Train services and the Etmilyn Forest Diner restaurant train have been the 'lifeline' of the HVTR revenue base during the suspension of Steam Ranger services. During the 2009-2010 school holiday period the Etmilyn Forest Train will operate every day, while it was reported in November that Etmilyn Forest Diner services were almost sold out for December. Maintaining suitable motive power for these services has been a challenge. 4-6-0 G123 was returned to Pinjarra workshops for summer maintenance on 20 September, leaving ex-Tasmanian Government Railways 0-6-0DM V5 (Vulcan Foundry 2381 of 1951) to handle all services while the long-standing project to overhaul its sister 0-6-0DM V4 (VF 2230 of 1948) continued at Pinjarra. The latter locomotive was given a test run in Pinjarra yard on 23 November.

Pinjarra Steam Express, November 2009

CARNARVON LIGHT RAILWAY
1067mm gauge
Carnarvon Heritage Group Inc.

Further to the report in LR 210 (pp. 37-39), 0-4-0T *KIMBERLEY* (A Barclay 1754 of 1921) has received some maintenance work and was steamed at Heritage Precinct on Babbage Island on 17 November 2009. The old line from the jetty heritage precinct to the Carnarvon town centre is still *in situ*, but requires bridge repairs and heavy maintenance work before it can be used by heritage trains. The Carnarvon Heritage Group committee plan to restore the line and operate steam trains from town to the jetty.

WA Railscene 55, December 2009, via John Browning.

Northern Territory

ADELAIDE RIVER & SNAKE CREEK RAILWAY 1067mm gauge
Friends of the North Australia Railway (Adelaide River)

With its 99th birthday on 13 December 2009 (its delivery date from the factory in Leeds), Mike Bowman and his small team of volunteers made rapid progress in reassembling the ex-Mt Isa Mines 0-4-0ST (Hudswell Clarke 928 of 1910) at the FNAR Darwin works base in order to have it looking good for the occasion. The saddle tank (see LR 209, pp. 30-31) has been re-installed, with the steam dome and the chimney restored to 1910 appearance and refitted. Subsequently, Mike manufactured and installed bronze copies of the original builders' plates on the cab sides and completed the lining on the cab faithfully following the 1910 appearance. The missing clamps for the smoke box door have been fabricated and the four dogs secured, with a coat of black applied to the whole boiler. Peter Cornell welded up the connections for the face plates on the boiler front and trued the new plates up on his facing machine. Tom Bertenshaw and Leo Izod proved to be incredibly resourceful in sourcing numerous special fittings required for compressed air running, like 'in-line oilers' and high pressure control valves. A $50 bid on EBay secured a chime whistle that looks and sounds great mounted on the cab spectacle plate. A slightly higher EBay bid produced a superb pair of complete boiler water level sight glass gauges, to be installed shortly. A contemporary pressure gauge and steam stand are being currently being fitted in the cab following original arrangement drawings and advice kindly supplied by Ronald Redman, Chairman of the UK Industrial Railway Society and Hudswell Clarke guru.

As reported in LR 205 (p, 31), it is planned to operate the locomotive at Adelaide River running on compressed air. On 28-29 November, Mike and Peter Cornell installed the equipment and piping to supply compressed air to the regulator and cylinders. An air hose can now be connected at the boiler face in the cabin and the loco's speed controlled by the original regulator. The new arrangement also permits the installation of an air braking system in addition to the original manual brake. Mike and Peter eagerly trialled the new motive power system at 120 psi for a short run and report that it was a great success. Subject to the provision of a mountain of paperwork for the local Rail Safety regulators, it is planned to have 928 operating at Adelaide River in 2010 and there will be a big celebration there for its 100th birthday next December!

Mike Bowman and Trevor Horman, 11/09

Mike Bowman stands proudly beside his 'baby', the ex-Mt Isa Mines 0-4-0ST 3 (Hudswell Clarke 928 of 1910) as its restoration project at the Darwin base of the Friends of the North Australian Railway (Adelaide River) achieves another milestone. *Photo Trevor Horman*

Former Fairymead Mill Baldwin 0-4-2T No.1 FAIRYMEAD *(10533 of 1889), crosses Bridge No. 2 at Lake Macquarie Light Rail, Toronto NSW, on its special 120th birthday running day, 19 December 2009. Photo: Bruce Belbin*

❒ *The former Fairymead Mill* FELIN-HEN *(Baldwin 46828 of 1917) returned to France in 2002 and is nearing the end of its restoration to Great War condition. In its original guise as 5104 it is pictured at Tacot des Lacs, near Nemours, in 2009. Photo: Patrick Mourot*

❒ *On Saturday 5 September 2009, the low-loader carrying the Fyansford Garratt pauses at School Road, Menzies Creek, where 'Puffing Billy' loco 8A bids farewell as it departs with a regular service train to Lakeside. Photo: John Thompson*

The ANGRMS volunteers who have supported the Durundur Railway at Woodford over the years and who helped to make the Centenary of the QR line to Woodford together with the 30th ANGRMS celebrations a success, pose with Bundaberg Foundry 0-6-2T 5 (B/N 5 of 1952) at the conclusion of the day's activities on 6 December 2009. *Photo: Lindsay Bishop*

AUSTRALIAN NARROW GAUGE RAILWAY MUSEUM SOCIETY – the first 30 years!!

The proprietor of a small business would be very happy if his business was still operating after 30 years, especially if it was growing its patronage *AND* it did not need to pay its workers because they were prepared to work at their cost!!

Such is the Australian Narrow Gauge Railway Museum Society's small business, the Durundur Railway at Woodford.

As Queensland railway enthusiasts watched the last QR steam locomotives withdrawn at the end of the 1960s, they knew that the few remaining cane railway steam locomotives would soon follow. They also had the experience of Talyllyn in Wales, Puffing Billy near Melbourne and other enthusiast-run railways elsewhere which had shown that enthusiasts could preserve a railway. So in 1971 when a meeting was convened, the idea of preserving and operating steam locomotives was known to be achievable. Enthusiasts formed the Australian Narrow Gauge Railway Museum Society [ANGRMS] with the expectation that they could preserve the concept of steam locomotives hauling paying passengers to fund their continued operation.

Success depended on finding a suitable location, obtaining a collection of 2ft gauge locomotives and rolling stock and, not to be underestimated, much hard work. The location selected was Woodford, a little over an hour's drive north-west of Brisbane where water and power were available and the township could provide the other usual facilities required. Importantly a strip of land which had formerly been used by a QR branch line [closed in 1964] was also available to give the proposed line a route along which to extend. By 1979, the site had been prepared with sufficient facilities to enable a passenger service to commence.

In the 30 subsequent years, the Durundur Railway has provided rides and both an interesting and educational experience for many passengers while also providing the members of ANGRMS with a social outlet.

Whilst volunteers are essential to the success of all 'tourist railways' it should not be forgotten that people volunteer not only because they believe in the cause but also because they get something in return. Often this is the good feeling that is associated with doing something worthwhile with a team of like-minded people.

Like almost all similar tourist railways, the Durundur Railway is totally reliant on volunteers who must maintain and repair the track and rolling stock in a safe condition but also attract as many travellers as possible. The reality is that fares only cover insurance costs and so the railway is also dependent on other revenue activities, mainly sales of railway ephemera.

December 2009 marked the centenary of the opening of the QR branch line to Woodford. Whilst this was not particularly relevant to the Durundur Railway it was too good an opportunity to let pass without attempting to capitalise on it for publicity and revenue purposes. So ANGRMS decided to publish a centenary book and hold a function with QR and the local government authority [the Moreton Bay Regional Council] represented to gain publicity, make a profit from the book eventually and hopefully provide an opportunity to involve the local community in an ANGRMS sponsored event.

As the anniversary fell fortuitously on an ANGRMS running day, a ribbon cutting by local Councillor Adrian Raedel was held and a plaque provided by QR and a 'WOODFORD' station name board and seat donated by members Peter and Nani Mills were unveiled. QR was represented by its historian, Greg Hallam, who presented a commemorative plaque recording details of the line. Guests then boarded the train for the ride to the end of the Durundur Railway line where the book *The Railways of Caboolture, Woodford and Kilcoy* was launched at the Storeybrook Cottage venue.

This effort took some of the members out of their comfort zone but showed that the Society has the capability to do more than just run the train, and this will be vital if the train is to continue running for another 30 years; with the involvement then of another generation of volunteers. Each of the four newspapers which circulate in the area published a news item on the event, which helped raise the local profile of the railway.

Brian Webber